



ENGINEERED  
FASTENERS

# PRODUCT GUIDE

— VOL. 2 —



# YOU'RE NOT STANDARD, NEITHER ARE WE

Our purpose is simple — deliver the greatest return on every effort, so you get the best possible results for your business. SPAX® engineered fasteners drive like butter and hold like iron. Working with us is just as easy and effective. It's the unique advantage we bring to everything we do. We call it the SPAX Factor.™

The SPAX Factor™ is a simple formula for working smarter. To multiply results and reduce effort — just add SPAX®.

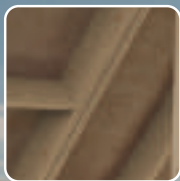


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**MULTI-PLY (SAWN LUMBER ASSEMBLIES)**  
TER No. 1802-03



**UPLIFT TRUSS/ RAFTER CONNECTION**  
TER No. 1910-02



**WINDOW INSTALL**



**MULTI-PLY ENGINEERED WOOD ASSEMBLIES**  
(LVL, PSL, LSL) TER No. 1802-03



**CABINET HANGING**



**DECK LEDGER ATTACHMENT**  
TER No. 1711-01



**SUBFLOOR**



**DECK BOARD FASTENING**



# 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 [SPAXFinder.com](https://www.spaxfinder.com)**

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

[www.spax.us](https://www.spax.us)





PERGOLA ASSEMBLY



PRIVACY FENCE ATTACHMENT



DECK POST

## STRUCTURAL LAGS

EXTERIOR



INTERIOR



## MULTI-MATERIAL FASTENERS

EXTERIOR

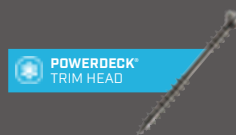


INTERIOR

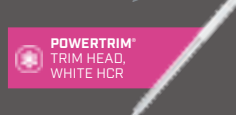


## SPECIALTY FASTENERS

STAINLESS STEEL



SPECIALTY TRIM



# 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.

## BUILT-ON WASHER

Offers a low-profile option for outstanding clamping force with improved aesthetics.

# STRONGER CONNECTION

## PATENTED SERRATIONS

# 40% LESS TORQUE NEEDED

# ZERO PRE-DRILLING (1/4" & 5/16")

T-STAR Washer Head  
PowerLags®



## T-STAR

# REDUCED STRIPPING

## HCR COATING

# IRC/IBC CODE COMPLIANT

For use in treated lumber and exterior exposure condition 3 (general construction).

## HEAT TREATED

# GRADE-5 DURABILITY



TER No. 1711-01  
Deck Ledger Attachment

TER No. 1802-03  
Multi-ply: Sawn Lumber  
Assemblies & Engineered  
Wood Assemblies





# WE HELP YOUR CUSTOMERS AMPLIFY THEIR CRAFT

- Eliminate pre-drilling to increase jobsite productivity by up to 30%
- Increase driving torque by 40% without the risk of stripping
- SPAX PowerLags offer a connection that's building code-recognized
- SPAX PowerLags will provide the highest pullout and pullover values in the industry

“

## I WILL NEVER GO BACK

I have tried many different fasteners over the years, and have found none that look, perform and last as well as SPAX does. I will never go back!

**MATT MOORE**

Matt Moore Designs & Cabinetry



**ENHANCED PRODUCTIVITY  
STRONGER RESULTS  
SATISFIED CUSTOMERS**

# HISTORY OF ABC US

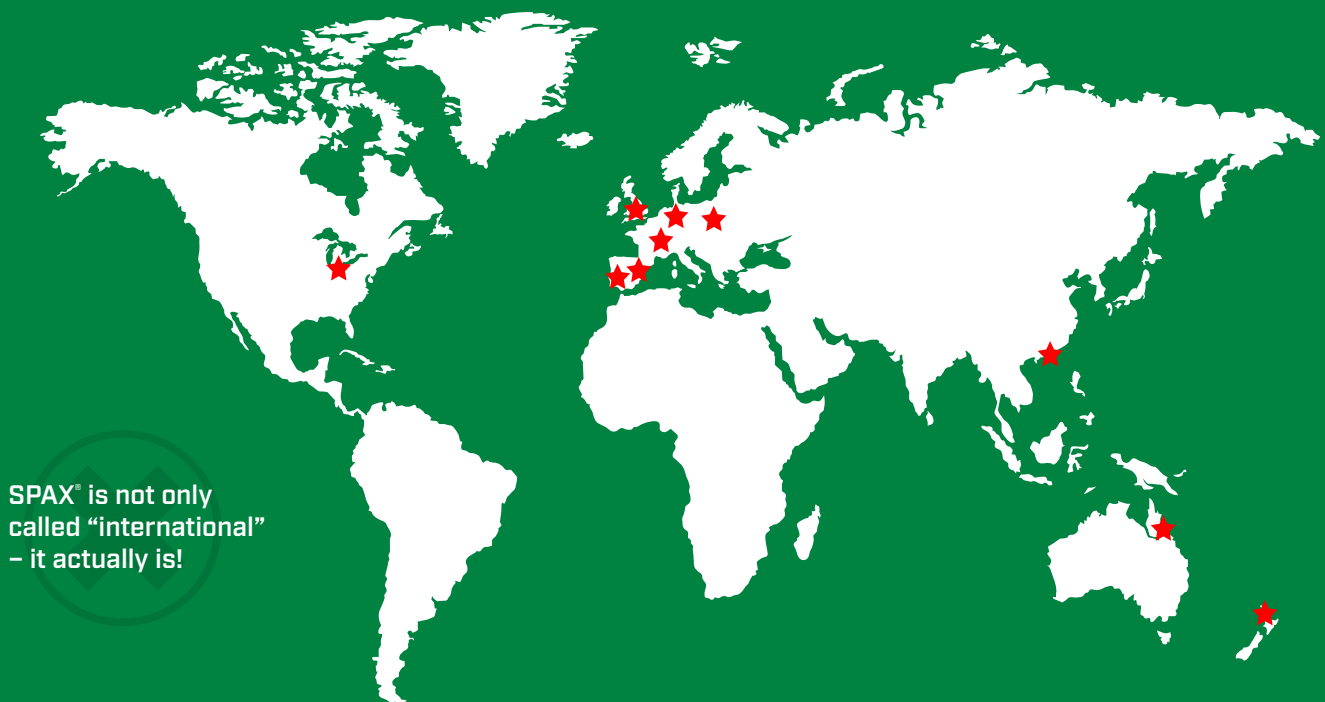


SPAX® is a brand of Altenloh, Brinck & Co. of Ennepetal, Germany, founded in 1823 and first introduced to the European market in 1967 as a revolutionary line of multi-material construction fasteners. Today, the SPAX® brand represents a broad selection of engineered fasteners for the construction industries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

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



Ennepetal, Germany



SPAX® is not only called “international” – it actually is!

## ONE COMPANY – TWO BRANDS





# HISTORY OF ABC US



## TRUFAST®

TRUFAST® began selling commercial roofing screws.

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



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

1992

2006

2011

1981

2004

2010

SPAX® started distributing products in the U.S.

Altenloh, Brinck & Co. purchased TRUFAST.

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.



ALTENLOH, BRINCK & CO. US, INC.



# HISTORY OF ABC US



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

ABC US acquired Rodenhouse innovative fastening solutions.

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

**2015**

**2021**

**2013**

**2017**

**2022**

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

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.

**TRUFAST**  
WALLS



# MULTI-MATERIAL 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.

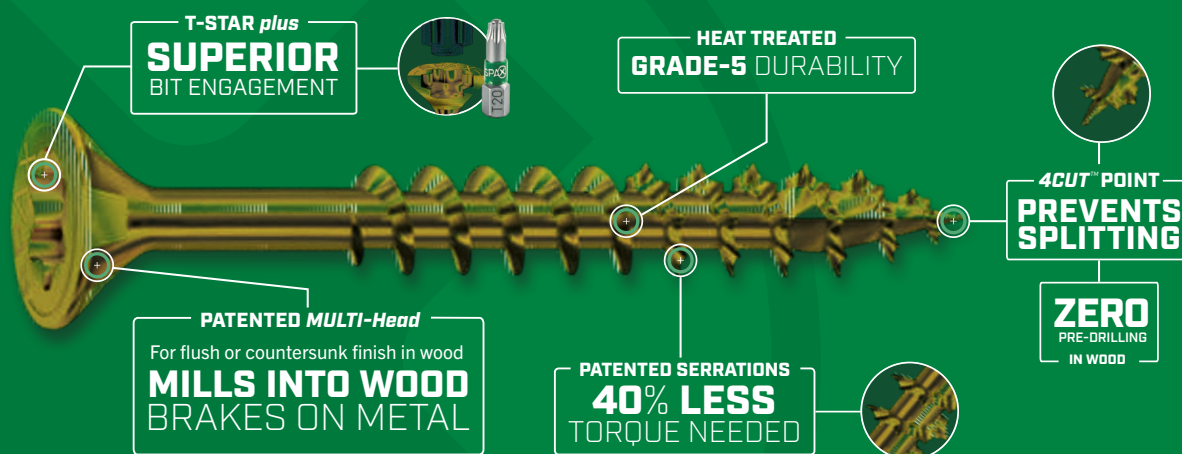
## MULTI-MATERIAL SCREWS ENGINEERED FOR VERSATILITY

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

- Heat treated to grade 5 durability
- Patented thread serrations reduce driving torque to prolong power tool battery life
- Unique 4CUT™ Point prevents splitting and requires no pre-drilling in wood

## MULTIPLE FASTENER STYLES

- 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)
- Zinc, yellow zinc, HCR®, HCR-X™ and 304 stainless steel for many interior and exterior applications
- Drive types: T-STAR *plus* “The PRO’s Choice”, and Unidrive (Phillips/Square drive combination)



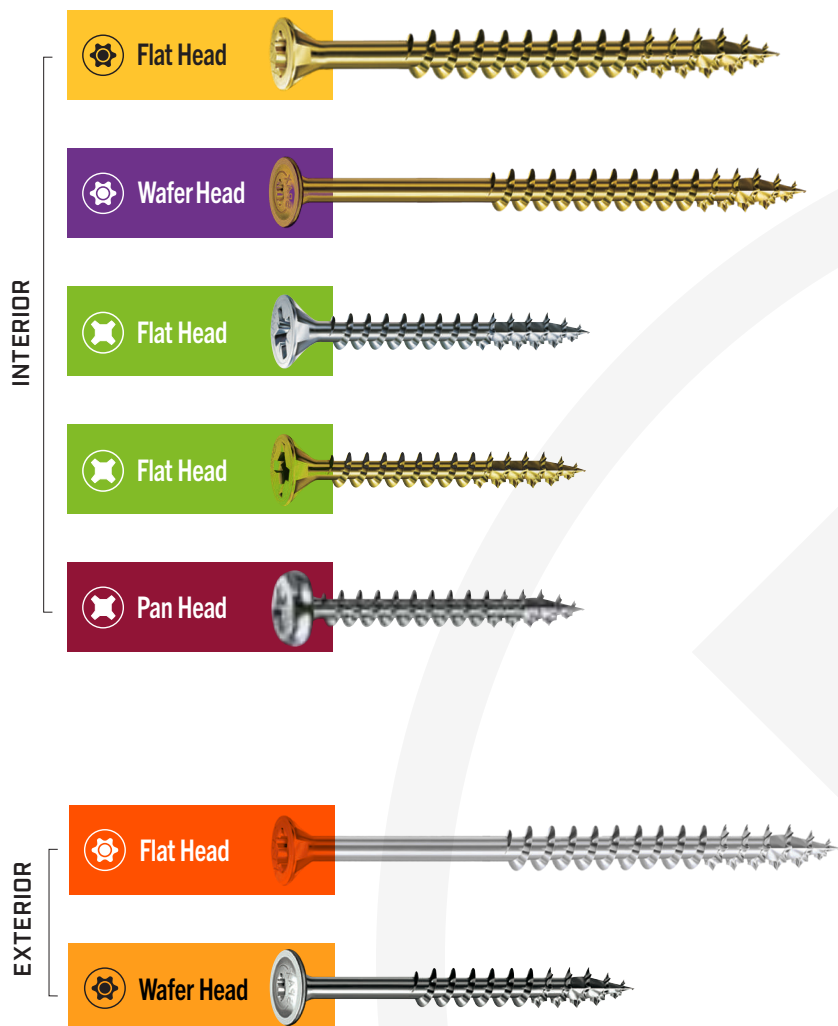
# MULTI-MATERIAL ENGINEERED FASTENERS



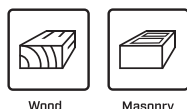
SPAX® – the common denominator that plays well with virtually every material and project type, offering the largest variety of diameters, lengths and head styles in the industry.



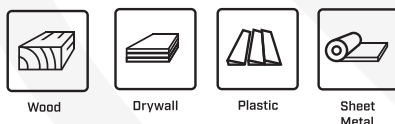
TER No. 2010-02  
Construction Screw  
Properties



Main Member / Base Material



Side Member / Attached Material





# T-STAR *plus* Flat Head Yellow Zinc

## Multi-Material Construction



### 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 to grade 5 durability 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).



#### Patented **MULTI-Head**

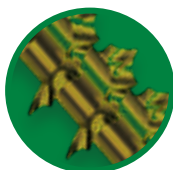
Countersinks screw head flush with material.

U.S. Patent No. 7,334,976



#### Unique **4CUT™** Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented **Serrations**

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

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

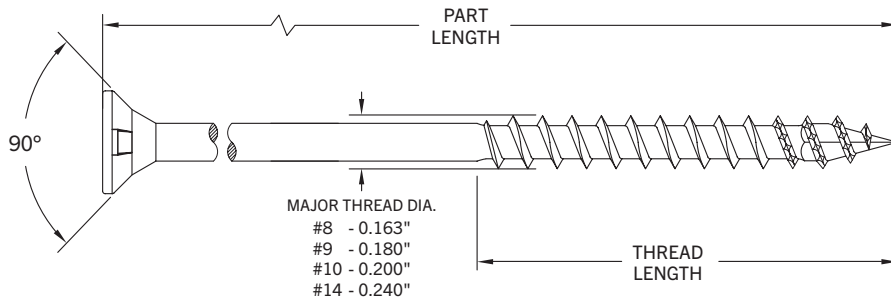


# T-STAR *plus* Flat Head Yellow Zinc

## Multi-Material Construction



INTERIOR



## PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 1-1/4"	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 1-1/2"	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 2-1/2"	N/A	1.340"	0.320"	T20+	133	1 lb. Box	5	4191020400604
					375	3 lb. Box	3	41910204006045
					618	5 lb. Box	3	4191020400607
					1500	Bulk Pail	N/A	3191020400600
#9 x 2-1/2"	N/A	1.655"	0.340"	T20+	116	1 lb. Box	5	4191020450604
					1500	Bulk Pail	N/A	3191020450600
#9 x 3-1/4"	N/A	1.810"	0.340"	T20+	89	1 lb. Box	5	4191020450804
					1500	Bulk Pail	N/A	3191020450800
#10 x 1-1/2"	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 2-1/2"	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 2-3/4"	N/A	1.600"	0.390"	T20+	1500	Bulk Pail	N/A	3191020500690
#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
					322	5 lb. Box	3	4191020500757
					1500	Bulk Pail	N/A	3191020500750

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



# T-STAR *plus* Flat Head Yellow Zinc

## Multi-Material Construction



PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#10 x 3-1/2"	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
#14 x 3-1/2"	N/A	2.400"	0.450"	T30+	10	Retail Pax**	10	4191020600902
#14 x 4"	N/A	2.400"	0.450"	T30+	8	Retail Pax**	10	4191020601002
					1000	Bulk Pail	N/A	3191020601000
#14 x 4-3/4"	N/A	2.650"	0.450"	T30+	8	Retail Pax**	10	4191020601202

NOTE: Only sold in master cartons.

\* Bit not included.



1, 3 and 5 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
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 1-1/4"			#10 x 2"		
#8 x 1-1/2"			#10 x 2-1/2"		
#8 x 2"			#10 x 3"		
#8 x 2-1/2"			#10 x 3-1/2"		
#9 x 2-1/2"			#14 x 3-1/2"		
#9 x 3-1/4"			#14 x 4"		
#10 x 1-1/2"			#14 x 4-3/4"		





# T-STAR *plus* Flat Head Yellow Zinc

## Multi-Material Construction



INTERIOR

## MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

SCREW DIAMETER	DRILL BIT	WEIGHT
#8/9	1/8"	Light
#10	5/32"	Medium
#14	3/16"	Medium

## PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH ( $W_H$ ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (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

<sup>1</sup> 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*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup> , $f_y$ (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#8	187,000	460	345
#9	201,000	540	435
#10	187,000	690	545

<sup>1</sup> Bending yield strength,  $f_y$ , is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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



INTERIOR

DIAMETER	REFERENCE LATERAL SHEAR VALUE <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1-1/2"	3/4"	3/4"	70	59	43
#8 x 1-3/4"	1"	3/4"	80	69	50
#8 x 2"	1-1/4"	3/4"	80	70	55
#8 x 2-1/2"	1"	1-1/2"	84	75	58
#9 x 2-1/2"	1"	1-1/2"	105	92	73
#9 x 3-1/4"	1-3/4"	1-1/2"	116	106	90
#10 x 1-1/2"	3/4"	3/4"	86	72	53
#10 x 2"	1-1/4"	3/4"	112	99	73
#10 x 2-1/2"	1"	1-1/2"	115	101	81
#10 x 2-3/4"	1-1/4"	1-1/2"	132	117	91
#10 x 3"	1-1/2"	1-1/2"	132	121	103
#10 x 3-1/2"	1-1/2"	1-1/2"	132	121	103
#14 x 2"	1-1/4"	3/4"	145	121	88
#14 x 2-1/2"	1"	1-1/2"	151	134	109
#14 x 3"	1-1/2"	1-1/2"	187	171	133
#14 x 3-1/2"	2"	1-1/2"	187	172	146
#14 x 4"	3"	1-1/3"	187	172	146
#14 x 4-1/2"	4"	1-1/4"	187	172	146

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>6</sup> 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 <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 1-1/4"	13/16"	7/16"	40	-
#8 x 1-1/4"	25/32"	15/32"	40	33
#8 x 1-1/4"	21/32"	19/32"	42	32
#8 x 1-1/2"	1-1/16"	7/16"	51	-
#8 x 1-1/2"	1-1/32"	15/32"	50	44
#8 x 1-1/2"	29/32"	19/32"	49	41
#8 x 1-1/2"	25/32"	23/32"	51	39
#8 x 1-3/4"	1-5/16"	7/16"	53	-
#8 x 1-3/4"	1-9/32"	15/32"	54	46
#8 x 1-3/4"	1-5/32"	19/32"	59	48
#8 x 1-3/4"	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



# T-STAR *plus* Flat Head Yellow Zinc

## Multi-Material Construction



ENGINEERED  
FASTENERS

INTERIOR

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 2"	1-9/32"	23/32"	64	51
#8 x 2-1/2"	1-9/16"	7/16"	53	-
#8 x 2-1/2"	1-17/32"	15/32"	54	46
#8 x 2-1/2"	1-13/32"	19/32"	59	48
#8 x 2-1/2"	1-9/32"	23/32"	64	51
#9 x 2-1/2"	2-1/16"	7/16"	71	-
#9 x 2-1/2"	2-1/32"	15/32"	71	62
#9 x 2-1/2"	1-29/32"	19/32"	76	63
#9 x 2-1/2"	1-25/32"	23/32"	81	66
#10 x 1-1/4"	13/16"	7/16"	48	-
#10 x 1-1/4"	25/32"	15/32"	48	40
#10 x 1-1/2"	1-1/16"	7/16"	61	-
#10 x 1-1/2"	1-1/32"	15/32"	60	53
#10 x 1-1/2"	29/32"	19/32"	60	49
#10 x 1-1/2"	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 2-1/2"	2-1/16"	7/16"	80	-
#10 x 2-1/2"	1-17/32"	15/32"	81	70
#10 x 2-1/2"	1-29/32"	19/32"	85	72
#10 x 2-1/2"	1-25/32"	23/32"	90	74

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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



### 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 to grade 5 durability 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).



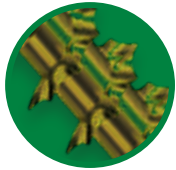
#### Low Profile Wafer Head

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



#### Unique 4CUT™ Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented Serrations

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

- 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

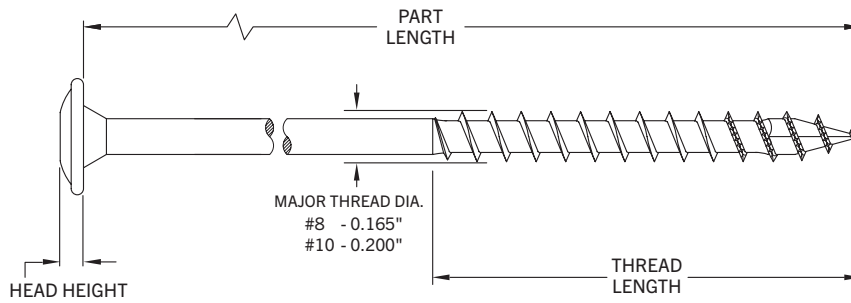


# T-STAR *plus* Wafer Head Yellow Zinc

## Cabinet Screws



INTERIOR



### 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 1-1/4"	N/A	0.670"	0.375" 0.080"	T20+	195	1 lb. Box	5	4281020400324
					951	5 lb. Box	3	4281020400327
					2500	Bulk Pail	N/A	3281020400320
#8 x 1-1/2"	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 2-1/2"	N/A	1.375"	0.375" 0.080"	T20+	120	1 lb. Box	5	4281020400604
					550	5 lb. Box	3	4281020400607
					1500	Bulk Pail	N/A	3281020400600
#10 x 2-1/2"	N/A	1.500"	0.470" 0.085"	T20+	75	1 lb. Box	5	4281020500604
					220	3 lb. Box	3	42810205006045
					375	5 lb. Box	3	4281020500607
					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
					311	5 lb. Box	3	4281020500757
					1000	Bulk Pail	N/A	3281020500750

NOTE: Only sold in master cartons.



1 and 3 lb. Box



5 lb. Box



Bulk Pail



T-STAR *plus* Bit



# T-STAR *plus* Wafer Head Yellow Zinc

## Cabinet Screws



### 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 1-1/4"			#8 x 2-1/2"		
#8 x 1-1/2"			#10 x 2-1/2"		
#8 x 2"			#10 x 3"		

### MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

SCREW DIAMETER	DRILL BIT	WEIGHT
#8	1/8"	Light
#10	5/32"	Medium

### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W <sub>H</sub> ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (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

<sup>1</sup> Tabulated withdrawal and head pull-through design values (W) and (W<sub>H</sub>) are shown at a C<sub>p</sub> = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup> , f <sub>yb</sub> (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#8	187,000	460	345
#10	187,000	690	545

<sup>1</sup> Bending yield strength, f<sub>yb</sub>, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.





# T-STAR *plus* Wafer Head Yellow Zinc

## Cabinet Screws



INTERIOR

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

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>6</sup> 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 <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 1-1/4"	13/16"	7/16"	40	-
#8 x 1-1/4"	25/32"	15/32"	40	33
#8 x 1-1/4"	21/32"	19/32"	42	32
#8 x 1-1/2"	1-1/16"	7/16"	51	-
#8 x 1-1/2"	1-1/32"	15/32"	50	44
#8 x 1-1/2"	29/32"	19/32"	49	41
#8 x 1-1/2"	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 2-1/2"	1-5/16"	7/16"	51	46
#8 x 2-1/2"	1-9/32"	15/32"	52	48
#8 x 2-1/2"	1-5/32"	19/32"	57	51
#10 x 2-1/2"	2-1/16"	7/16"	80	-
#10 x 2-1/2"	1-17/32"	15/32"	81	70
#10 x 2-1/2"	1-29/32"	19/32"	85	72
#10 x 2-1/2"	1-25/32"	23/32"	90	74

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

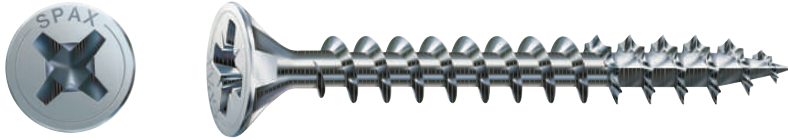
<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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 Combination (PH & SQ) Flat Head Zinc

### Multi-Material Construction



### 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 to grade 5 durability 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).

INTERIOR



#### Patented **MULTI-Head**

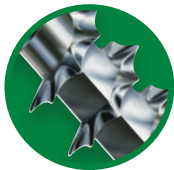
Countersinks screw head flush with material.

U.S. Patent No. 7,334,976



#### Unique **4CUT™** Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented **Serrations**

Allow for quicker, easier fastening.

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



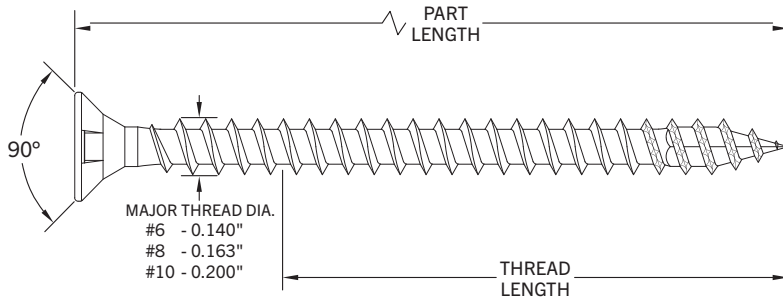
### TYPICAL INTERIOR APPLICATIONS

- 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 Combination [PH & SQ] Flat Head Zinc

## Multi-Material Construction



## PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	PHILLIPS #	SQUARE #	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#6 x 1/2"	Full	0.270"	2	1	50	Retail Pax <sup>®*</sup>	10	4101010350132
					150	Small Retail Pax <sup>®*</sup>	10	41010103501342
#6 x 5/8"	Full	0.270"	2	1	50	Retail Pax <sup>®*</sup>	10	4101010350162
					150	Small Retail Pax <sup>®*</sup>	10	41010103501642
					582	1 lb. Box	5	4101010350164
#6 x 3/4"	Full	0.270"	2	1	45	Retail Pax <sup>®*</sup>	10	4101010350202
					100	Large Retail Pax <sup>®*</sup>	10	41010103502042
					480	1 lb. Box	5	4101010350204
#6 x 1"	Full	0.270"	2	1	40	Retail Pax <sup>®*</sup>	10	4101010350252
					100	Large Retail Pax <sup>®*</sup>	10	41010103502542
					384	1 lb. Box	5	4101010350254
#6 x 1-1/4"	Full	0.270"	2	1	35	Retail Pax <sup>®*</sup>	10	4101010350322
					100	Large Retail Pax <sup>®*</sup>	10	41010103503242
					335	1 lb. Box	5	4101010350324
#6 x 1-1/2"	Full	0.270"	2	1	30	Retail Pax <sup>®*</sup>	10	4101010350402
					283	1 lb. Box	5	4101010350404
#6 x 1-3/4"	Full	0.270"	2	1	25	Retail Pax <sup>®*</sup>	10	4101010350452
#8 x 5/8"	Full	0.320"	2	2	40	Retail Pax <sup>®*</sup>	10	4101010400162
					405	1 lb. Box	5	4101010400164
#8 x 3/4"	Full	0.320"	2	2	35	Retail Pax <sup>®*</sup>	10	4101010400202
					100	Large Retail Pax <sup>®*</sup>	10	41010104002042
					350	1 lb. Box	5	4101010400204
#8 x 1"	Full	0.320"	2	2	30	Retail Pax <sup>®*</sup>	10	4101010400252
					75	Large Retail Pax <sup>®*</sup>	10	41010104002542
#8 x 1-1/4"	Full	0.320"	2	2	30	Retail Pax <sup>®*</sup>	10	4101010400322
					75	Large Retail Pax <sup>®*</sup>	10	41010104003242
					240	1 lb. Box	5	4101010400324
#8 x 1-1/2"	Full	0.320"	2	2	25	Retail Pax <sup>®*</sup>	10	4101010400402
					40	Large Retail Pax <sup>®*</sup>	10	41010104004042
					197	1 lb. Box	5	4101010400404

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



# Unidrive Combination (PH & SQ) Flat Head Zinc

## Multi-Material Construction



### PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	PHILLIPS #	SQUARE #	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#8 x 1-3/4"	Full	0.320"	2	2	20	Retail Pax**	10	4101010400452
#8 x 2"	Full	0.320"	2	2	20	Retail Pax**	10	4101010400502
					40	Large Retail Pax**	10	41010104005042
					161	1 lb. Box	5	4101010400504
					1500	Bulk Pail	N/A	3101010400600
#8 x 2-1/2"	1.970"	0.320"	2	2	20	Retail Pax**	10	4101010400602
					40	Large Retail Pax**	10	41010104006042
					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
					100	Large Retail Pax**	10	41010105002542
#10 x 1-1/4"	Full	0.390"	2	2	20	Retail Pax**	10	4101010500322
#10 x 1-1/2"	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 2-1/2"	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 3-1/2"	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.



Retail Pax®



1 lb. Box



Bulk Pail



#2 Phillips / #2 Square Bit





# Unidrive Combination [PH & SQ] Flat Head Zinc

## Multi-Material Construction



### 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.



### FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#6 x 5/8"			#8 x 1-3/4"		
#6 x 3/4"			#8 x 2"		
#6 x 1"			#8 x 2-1/2"		
#6 x 1-1/4"			#10 x 3/4"		
#6 x 1-1/2"			#10 x 1"		
#6 x 1-3/4"			#10 x 1-1/4"		
#8 x 5/8"			#10 x 1-1/2"		
#8 x 3/4"			#10 x 2"		
#8 x 1"			#10 x 2-1/2"		
#8 x 1-1/4"			#10 x 3"		
#8 x 1-1/2"			#10 x 3-1/2"		

INTERIOR

### MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

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

### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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



# Unidrive Combination (PH & SQ) Flat Head Zinc

## Multi-Material Construction



DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W <sub>H</sub> ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (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

<sup>1</sup> Tabulated withdrawal and head pull-through design values (W) and (W<sub>H</sub>) are shown at a C<sub>D</sub> = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> Head pull-through values for #6 diameter and larger in Southern pine, Douglas-Fir, Hem Fir and Spruce-Pine-Fir are minimum 1.0" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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 <sup>1</sup> , f <sub>y</sub> (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#6	198,000	310	265
#8	187,000	460	345
#10	187,000	690	545

<sup>1</sup> Bending yield strength, f<sub>y</sub>, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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 <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#6 x 1-1/2"	3/4"	3/4"	57	50	37
#6 x 1-3/4"	1"	3/4"	63	56	44
#6 x 2"	1"	3/4"	63	56	44
#8 x 1-1/2"	3/4"	3/4"	70	59	43
#8 x 1-3/4"	1"	3/4"	80	69	50
#8 x 2"	1-1/4"	3/4"	80	70	55
#8 x 2-1/2"	1"	1-1/2"	84	75	58
#10 x 1-1/2"	3/4"	3/4"	86	72	53
#10 x 2"	1-1/4"	3/4"	112	99	73
#10 x 2-1/2"	1"	1-1/2"	115	101	81
#10 x 2-3/4"	1-1/4"	1-1/2"	132	117	91
#10 x 3"	1-1/2"	1-1/2"	132	121	103
#10 x 3-1/2"	1-1/2"	1-1/2"	132	121	103

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain (Z<sub>⊥</sub>) and parallel to grain (Z<sub>||</sub>) orientations.

<sup>6</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1*.



# Unidrive Combination [PH & SQ] Flat Head Zinc

## Multi-Material Construction



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

INTERIOR





# Unidrive Combination (PH & SQ) Flat Head Zinc

## Multi-Material Construction



DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#10 x 1-1/2"	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 2-1/2"	2-1/16"	7/16"	80	-
#10 x 2-1/2"	1-17/32"	15/32"	81	70
#10 x 2-1/2"	1-29/32"	19/32"	85	72
#10 x 2-1/2"	1-25/32"	23/32"	90	74

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

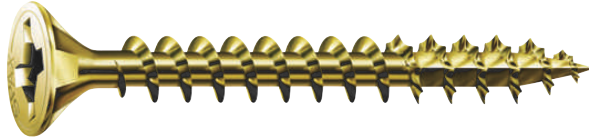
<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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.

INTERIOR

## ⊗ Unidrive Combination [PH & SQ] Flat Head Yellow Zinc

### Multi-Material Construction



### DESCRIPTION

SPAX® UNIDRIVE (combination drive — Phillips and Square) Flat Head fasteners with yellow 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 to grade 5 durability 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).

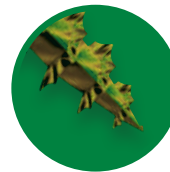
INTERIOR



#### Patented **MULTI-Head**

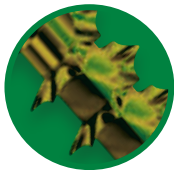
Countersinks screw head flush with material.

U.S. Patent No. 7,334,976



#### Unique **4CUT™ Point**

Prevents splitting and requires no pre-drilling in wood.



#### Patented **Serrations**

Allow for quicker, easier fastening.

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



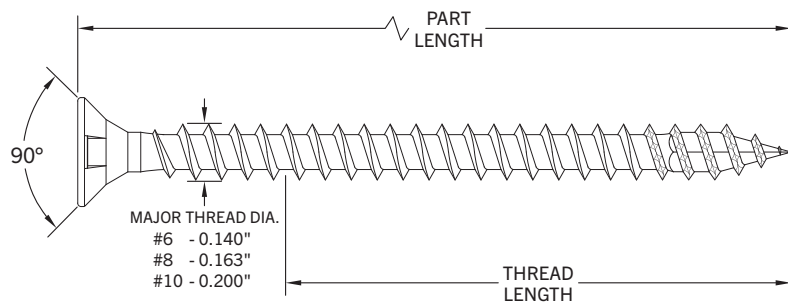
### TYPICAL INTERIOR APPLICATIONS

- 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 Combination (PH & SQ) Flat Head Yellow Zinc

## Multi-Material Construction



## PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	PHILLIPS #	SQUARE #	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#6 x 1/2"	Full	0.270"	2	1	50	Retail Pax®*	10	4101020350132
#6 x 5/8"	Full	0.270"	2	1	50	Retail Pax®*	10	4101020350162
#6 x 1"	Full	0.270"	2	1	40	Retail Pax®*	10	4101020350252
#6 x 1-1/4"	Full	0.270"	2	1	35	Retail Pax®*	10	4101020350322
#8 x 3/4"	Full	0.320"	2	2	35	Retail Pax®*	10	4101020400202
#8 x 1"	Full	0.320"	2	2	30	Retail Pax®*	10	4101020400252
#8 x 1-1/4"	Full	0.320"	2	2	30	Retail Pax®*	10	4101020400322
#8 x 1-1/2"	Full	0.320"	2	2	25	Retail Pax®*	10	4101020400402
					197	1 lb. Box	5	4101020400404
#8 x 2"	Full	0.320"	2	2	20	Retail Pax®*	10	4101020400502
					161	1 lb. Box	5	4101020400504
#8 x 2-1/2"	1.970"	0.320"	2	2	20	Retail Pax®*	10	4101020400602
					133	1 lb. Box	5	4101020400604
#10 x 2"	Full	0.390"	2	2	12	Retail Pax®*	10	4101020500502
					105	1 lb. Box	5	4101020500504
#10 x 2-1/2"	2.275"	0.390"	2	2	12	Retail Pax®*	10	4101020500602
					81	1 lb. Box	5	4101020500604
#10 x 3"	2.375"	0.390"	2	2	16	Retail Pax®*	10	4101020500752
					72	1 lb. Box	5	4101020500754
					200	3 lb. Box	3	41010205007545

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



Retail Pax®



1 lb. Box



3 lb. Box



#2 Phillips / #2 Square Bit





# Unidrive Combination (PH & SQ) Flat Head Yellow Zinc

## Multi-Material Construction



### 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.



### FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#6 x 1/2"			#8 x 1-1/2"		
#6 x 5/8"			#8 x 2"		
#6 x 1"			#8 x 2-1/2"		
#6 x 1-1/4"			#10 x 2"		
#8 x 3/4"			#10 x 2-1/2"		
#8 x 1"			#10 x 3"		
#8 x 1-1/4"					

INTERIOR

### MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

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

### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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



# Unidrive Combination (PH & SQ) Flat Head Yellow Zinc

## Multi-Material Construction



DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH ( $W_H$ ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (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

<sup>1</sup> 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*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> Head pull-through values for #6 diameter and larger in Southern pine, Douglas-Fir, Hem Fir and Spruce-Pine-Fir are minimum 1.0" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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 <sup>1</sup> , $f_y$ (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#6	198,000	310	265
#8	187,000	460	345
#10	187,000	690	545

<sup>1</sup> Bending yield strength,  $f_y$ , is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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 <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1-1/2"	3/4"	3/4"	70	59	43
#8 x 2"	1-1/4"	3/4"	80	70	55
#8 x 2-1/2"	1"	1-1/2"	84	75	58
#10 x 2"	1-1/4"	3/4"	112	99	73
#10 x 2-1/2"	1"	1-1/2"	115	101	81
#10 x 3"	1-1/2"	1-1/2"	132	121	103

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>6</sup> 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 <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#6 x 1"	9/16"	7/16"	28	-
#6 x 1"	17/32"	15/32"	28	22
#6 x 1-1/4"	13/16"	7/16"	35	-
#6 x 1-1/4"	25/32"	15/32"	35	29
#6 x 1-1/4"	21/32"	19/32"	36	28
#6 x 1-1/4"	17/32"	23/32"	38	29
#8 x 1-1/4"	13/16"	7/16"	40	-



## Multi-Material Construction

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 1-1/4"	25/32"	15/32"	40	33
#8 x 1-1/4"	21/32"	19/32"	42	32
#8 x 1-1/2"	1-1/16"	7/16"	51	-
#8 x 1-1/2"	1-1/32"	15/32"	50	44
#8 x 1-1/2"	29/32"	19/32"	49	41
#8 x 1-1/2"	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 2-1/2"	1-9/16"	7/16"	53	-
#8 x 2-1/2"	1-17/32"	15/32"	54	46
#8 x 2-1/2"	1-13/32"	19/32"	59	48
#8 x 2-1/2"	1-9/32"	23/32"	64	51
#10 x 1-1/4"	13/16"	7/16"	48	-
#10 x 1-1/4"	25/32"	15/32"	48	40
#10 x 1-1/2"	1-1/16"	7/16"	61	-
#10 x 1-1/2"	1-1/32"	15/32"	60	53
#10 x 1-1/2"	29/32"	19/32"	60	49
#10 x 1-1/2"	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 2-1/2"	2-1/16"	7/16"	80	-
#10 x 2-1/2"	1-17/32"	15/32"	81	70
#10 x 2-1/2"	1-29/32"	19/32"	85	72
#10 x 2-1/2"	1-25/32"	23/32"	90	74

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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 Pan Head Zinc

## Multi-Material Pan Head



### 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 to grade 5 durability 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. AWP A UC1-UC2).

INTERIOR



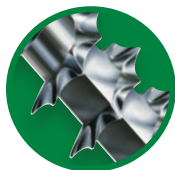
#### Pan Head

Provides excellent draw down and holding performance.



#### Unique 4CUT™ Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented Serrations

Allow for quicker, easier fastening.  
U.S. Patent No. 7,101,133

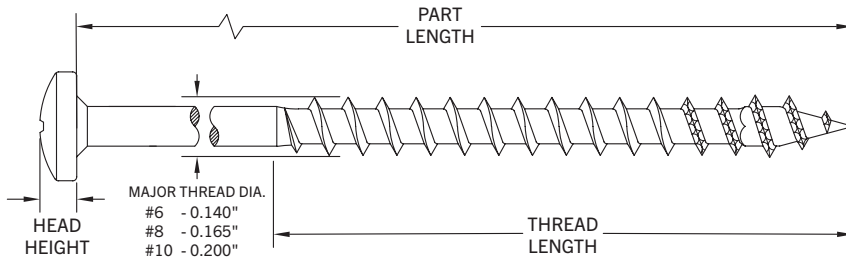


### TYPICAL INTERIOR APPLICATIONS

- 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 Pan Head Zinc

## Multi-Material Pan Head



### PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD DIA. HEAD HT.	PHILLIP #	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
						100	Large Retail Pax**	10	41110104002042
						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
						100	Large Retail Pax**	10	41110104002542
						225	1 lb. Box	5	4111010400254
#8 x 1-1/4"	Full	N/A	0.305" 0.105"	2	2	30	Retail Pax**	10	4111010400322
						200	1 lb. Box	5	4111010400324
#8 x 1-1/2"	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.

INTERIOR

# Unidrive Pan Head Zinc

## 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.




### FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#6 x 1/2"			#8 x 1-1/4"		
#6 x 5/8"			#8 x 1-1/2"		
#6 x 3/4"			#8 x 2"		
#8 x 5/8"			#10 x 5/8"		
#8 x 3/4"			#10 x 3/4"		
#8 x 1"			#10 x 1"		

### MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

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

**PERFORMANCE SPECIFICATIONS**

**TER No. 2010-02**  
 Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH ( $W_H$ ) <sup>1,2,3,4</sup>					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (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 ( $W_H$ ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (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

<sup>1</sup> 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*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> Head pull-through values for #6 diameter and larger in Southern pine, Douglas-Fir, Hem Fir and Spruce-Pine-Fir are minimum 1.0" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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 <sup>1</sup> , $f_y$ (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#6	198,000	310	265
#8	187,000	460	345
#10	187,000	690	545

<sup>1</sup> Bending yield strength,  $f_y$ , is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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 <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1-1/2"	3/4"	3/4"	70	59	43
#8 x 2"	1-1/4"	3/4"	80	70	55

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>6</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1*.





# Unidrive Pan Head Zinc

## Multi-Material Pan Head



DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 1-1/4"	13/16"	7/16"	40	-
#8 x 1-1/4"	25/32"	15/32"	40	33
#8 x 1-1/4"	21/32"	19/32"	42	32
#8 x 1-1/2"	1-1/16"	7/16"	51	-
#8 x 1-1/2"	1-1/32"	15/32"	50	44
#8 x 1-1/2"	29/32"	19/32"	49	41
#8 x 1-1/2"	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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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.



## 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 to grade 5 durability 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.



### Patented **MULTI-Head**

Countersinks screw head flush with material.

U.S. Patent No. 7,334,976



### Unique **4CUT™** Point

Prevents splitting and requires no pre-drilling in wood.



### Patented **Serrations**

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.



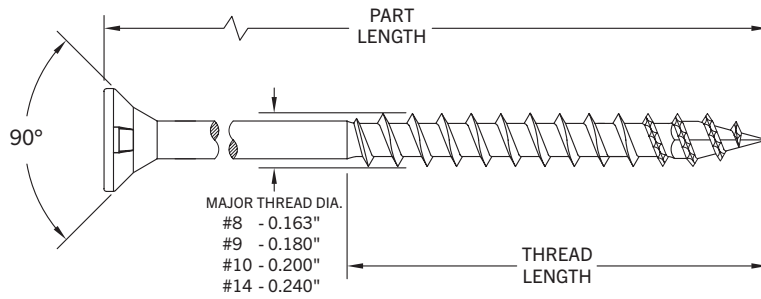
## TYPICAL EXTERIOR APPLICATIONS

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



# T-STAR *plus* Flat Head HCR-X™

Exterior / Decking / Framing



## PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#8 x 1-1/4"	N/A	0.670"	0.320"	T20+	230	1 lb. Box	5	4191670400324
					1150	5 lb. Box	3	4191670400327
					2500	Bulk Pail	N/A	3191670400320
#8 x 1-1/2"	N/A	0.870"	0.320"	T20+	25	Retail Pax**	10	4191670400402
					195	1 lb. Box	5	4191670400404
					550	3 lb. Box	3	41916704004045
					975	5 lb. Box	3	4191670400407
					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
					770	5 lb. Box	3	4191670400507
					1500	Bulk Pail	N/A	3191670400500
#8 x 2-1/2"	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 2-1/2"	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 3-1/4"	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 1-1/2"	N/A	1.000"	0.390"	T20+	125	1 lb. Box	5	4191670500404
					625	5 lb. Box	3	4191670500407
					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
					474	5 lb. Box	3	4191670500507
					1500	Bulk Pail	N/A	3191670500500

NOTE: Only sold in master cartons.

\* Bit not included.

EXTERIOR

**PRODUCT SELECTION**

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#10 x 2-1/2"	N/A	1.600"	0.390"	T20+	81	1 lb. Box	5	4191670500604
					235	3 lb. Box	3	41916705006045
					388	5 lb. Box	3	4191670500607
					1500	Bulk Pail	N/A	3191670500600
#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
					335	5 lb. Box	3	4191670500757
					225	Mini Pail	3	4191670500758
					1500	Bulk Pail	N/A	3191670500750
#10 x 3-1/2"	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 1-1/4"	Full	N/A	0.450"	T30+	97	1 lb. Box	5	4191670600324
					1500	Bulk Pail	N/A	3191670600320
#14 x 1-1/2"	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 2-1/2"	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
					50	Project Pax®	5	41916706007543
					1000	Bulk Pail	N/A	3191670600750
#14 x 3-1/2"	N/A	2.400"	0.450"	T30+	10	Retail Pax**	10	4191670600902
					50	Project Pax®	5	41916706009043
					1000	Bulk Pail	N/A	3191670600900
#14 x 4"	N/A	2.400"	0.450"	T30+	8	Retail Pax**	10	4191670601002
					50	Project Pax®	5	41916706010043
					1000	Bulk Pail	N/A	3191670601000
#14 x 4-3/4"	N/A	2.650"	0.450"	T30+	8	Retail Pax**	10	4191670601202
					50	Project Pax®	5	41916706012043
					750	Bulk Pail	N/A	3191670601200

NOTE: Only sold in master cartons.

\* Bit not included.



# T-STAR *plus* Flat Head HCR-X™

Exterior / Decking / Framing



1, 3 and 5 lb. Boxes



Retail Pax®



Project Pax®



Mini and Bulk Pails



T-STAR *plus* Bit

## 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 1-1/4"			#10 x 3-1/2"		
#8 x 1-1/2"			#14 x 1"		
#8 x 2"			#14 x 1-1/4"		
#8 x 2-1/2"			#14 x 1-1/2"		
#9 x 2-1/2"			#14 x 2"		
#9 x 3-1/4"			#14 x 2-1/2"		
#10 x 1-1/2"			#14 x 3"		
#10 x 2"			#14 x 3-1/2"		
#10 x 2-1/2"			#14 x 4"		
#10 x 3"			#14 x 4-3/4"		

## MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

SCREW DIAMETER	DRILL BIT	WEIGHT
#8/9	1/8"	Light
#10	5/32"	Medium
#14	3/16"	Medium



# T-STAR *plus* Flat Head HCR-X™

## Exterior / Decking / Framing



### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W <sub>H</sub> ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (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

<sup>1</sup> Tabulated withdrawal and head pull-through design values (W) and (W<sub>H</sub>) are shown at a C<sub>p</sub> = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup> , f <sub>yb</sub> (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#8	187,000	460	345
#9	201,000	540	435
#10	187,000	690	545

<sup>1</sup> Bending yield strength, f<sub>yb</sub>, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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 <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1-1/2"	3/4"	3/4"	70	59	43
#8 x 1-3/4"	1"	3/4"	80	69	50
#8 x 2"	1-1/4"	3/4"	80	70	55
#8 x 2-1/2"	1"	1-1/2"	84	75	58
#9 x 2-1/2"	1"	1-1/2"	105	92	73
#9 x 3-1/4"	1-3/4"	1-1/2"	116	106	90
#10 x 1-1/2"	3/4"	3/4"	86	72	53
#10 x 2"	1-1/4"	3/4"	112	99	73



# T-STAR *plus* Flat Head HCR-X™

## Exterior / Decking / Framing



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

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain (Z<sub>⊥</sub>) and parallel to grain (Z<sub>||</sub>) orientations.

<sup>6</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1*.

EXTERIOR

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



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

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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 Wafer Head



### 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 to grade 5 durability 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.



#### Patented Serrations

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.

EXTERIOR



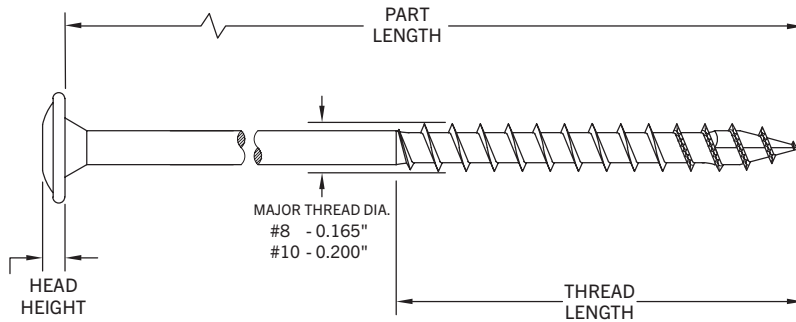
### TYPICAL EXTERIOR APPLICATIONS

- 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™

## Multi-Material Wafer Head



### 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 1-1/4"	N/A	0.670"	0.375" 0.080"	T20+	75	Large Retail Pax®	10	42816704003242
					195	1 lb. Box	5	4281670400324
					2500	Bulk Pail	N/A	3281670400320
#8 x 1-1/2"	N/A	0.875"	0.375" 0.080"	T20+	40	Large Retail Pax®	10	42816704004042
					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 2-1/2"	N/A	1.375"	0.375" 0.080"	T20+	120	1 lb. Box	5	4281670400604
					1500	Bulk Pail	N/A	3281670400600
#10 x 2-1/2"	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.



Large Retail Pax®



1 and 3 lb. Box



Bulk Pail



T-STAR *plus* Bit

EXTERIOR



# T-STAR *plus* Wafer Head HCR-X™

## Multi-Material Wafer Head



### 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 1-1/4"			#8 x 2-1/2"		
#8 x 1-1/2"			#10 x 2-1/2"		
#8 x 2"			#10 x 3"		

### MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

SCREW DIAMETER	DRILL BIT	WEIGHT
#8	1/8"	Light
#10	5/32"	Medium

### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH ( $W_H$ ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (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

<sup>1</sup> Tabulated withdrawal and head pull-through design values (W) and ( $W_H$ ) are shown at a  $C_p = 1.0$ . Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup> , $f_y$ (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#8	187,000	460	345
#10	187,000	690	545

<sup>1</sup> Bending yield strength,  $f_y$ , is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

**Multi-Material Wafer Head**

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

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

<sup>1</sup> Penetration depth includes the length of tapered tip.<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.<sup>3</sup> 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.<sup>4</sup> 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.<sup>5</sup> Lateral design values apply to both perpendicular grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.<sup>6</sup> 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 <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 1-1/4"	13/16"	7/16"	40	-
#8 x 1-1/4"	25/32"	15/32"	40	33
#8 x 1-1/4"	21/32"	19/32"	42	32
#8 x 1-1/2"	1-1/16"	7/16"	51	-
#8 x 1-1/2"	1-1/32"	15/32"	50	44
#8 x 1-1/2"	29/32"	19/32"	49	41
#8 x 1-1/2"	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 2-1/2"	1-5/16"	7/16"	51	46
#8 x 2-1/2"	1-9/32"	15/32"	52	48
#8 x 2-1/2"	1-5/32"	19/32"	57	51
#10 x 2-1/2"	2-1/16"	7/16"	80	-
#10 x 2-1/2"	1-17/32"	15/32"	81	70
#10 x 2-1/2"	1-29/32"	19/32"	85	72
#10 x 2-1/2"	1-25/32"	23/32"	90	74

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

<sup>1</sup> 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.<sup>2</sup> Penetration depth includes the length of the tapered tip.<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.<sup>5</sup> 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



## MDF/HARDWOOD & REAR PANEL



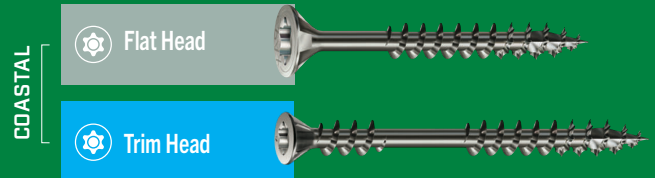
### Applications

- MDF Panels and Cabinet Frame Assembly
- Attaching back panels to bookcases, storage units and cabinetry without deforming



TER No. 2010-02  
Construction Screw  
Properties

## STAINLESS STEEL



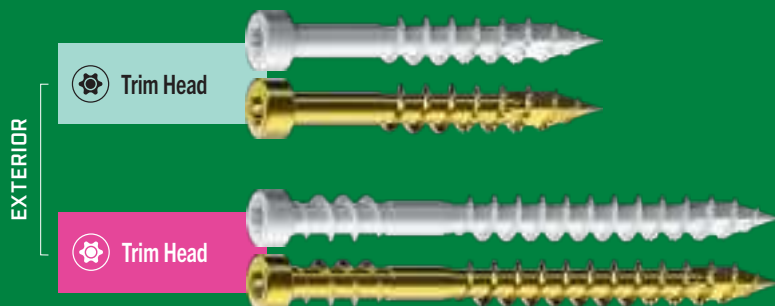
### Applications

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



TER No. 2010-02  
Construction Screw  
Properties

## FINISHING TRIM ATTACHMENT



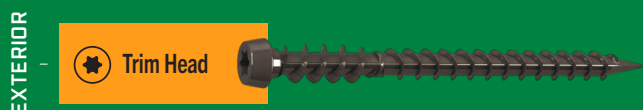
### Applications

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



TER No. 2001-01  
POWERTRIM®  
Screw Properties

## COMPOSITE DECK SCREWS



### Applications

- PVC boards
- Capstock
- Composite deck boards

### AVAILABLE IN 7 COMMON COMPOSITE DECK BOARD COLORS

Java Dark Brown Sand Pebble Slate Dark Gray Gray



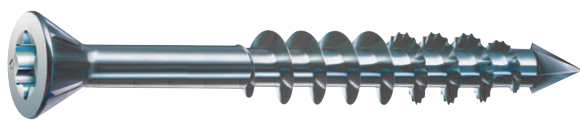


# T-STAR *plus* Trim Head Zinc MDF/Hardwood

## Specialty Fasteners



INTERIOR



### DESCRIPTION

SPAX® MDF / Hardwood fasteners with T-STAR *plus* trim head, UNIQUE CUT™ POINT and 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 to grade 5 durability 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).



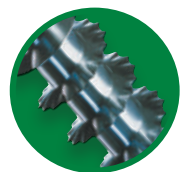
#### Trim Head with Cutting Ribs

Facilitates a flush or countersunk installation for desired aesthetics.



#### Unique CUT™ Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented Serrations

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.



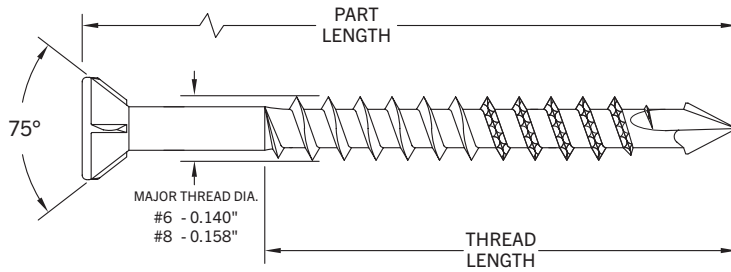
### TYPICAL INTERIOR APPLICATIONS

- 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 MDF/Hardwood

## Specialty Fasteners



## PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#6 x 1-1/2"	N/A	1.060"	0.230"	T15+	300	1 lb. Box	5	4351010350404
#8 x 1-3/4"	N/A	1.160"	0.270"	T20+	200	1 lb. Box	5	4351010400454
#8 x 2-1/2"	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 1-1/2"			#8 x 2-1/2"		
#8 x 1-3/4"					



### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W <sub>H</sub> ) <sup>1,2,3,4</sup>					
	SOUTHERN PINE (SG=0.55)		DOUGLAS-FIR (SG=0.50)		HEM FIR & SPRUCE-PINE-FIR (SG=0.42)	
	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (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 <sub>H</sub> ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (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

<sup>1</sup> Tabulated withdrawal and head pull-through design values (W) and (W<sub>H</sub>) are shown at a C<sub>0</sub> = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> Head pull-through values for #6 diameter and larger in Southern pine, Douglas-Fir, Hem Fir and Spruce-Pine-Fir are minimum 1.0" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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 <sup>1</sup> , f <sub>y</sub> (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#6	196,000	270	270
#8	171,000	340	305

<sup>1</sup> Bending yield strength, f<sub>y</sub>, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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 <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#6 x 1-1/2"	3/4"	3/4"	37	50	57
#8 x 1-3/4"	1"	3/4"	51	69	79
#8 x 2-1/2"	1"	1-1/2"	57	74	81

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain (Z<sub>⊥</sub>) and parallel to grain (Z<sub>∥</sub>) orientations.

<sup>6</sup> 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 <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#6 x 1-1/2"	1-1/16"	7/16"	41	-
#6 x 1-1/2"	1-1/32"	15/32"	42	35
#6 x 1-1/2"	29/32"	19/32"	42	35
#6 x 1-1/2"	25/32"	23/32"	43	34
#8 x 1-3/4"	1-5/16"	7/16"	51	-





# T-STAR *plus* Trim Head Zinc MDF/Hardwood

## Specialty Fasteners



INTERIOR

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1-3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 1-3/4"	1-9/32"	15/32"	52	44
#8 x 1-3/4"	1-5/32"	19/32"	57	46
#8 x 1-3/4"	1-1/32"	23/32"	59	48
#8 x 2-1/2"	2-1/16"	7/16"	51	-
#8 x 2-1/2"	2-1/32"	15/32"	52	44
#8 x 2-1/2"	1-29/32"	19/32"	57	46
#8 x 2-1/2"	1-25/32"	23/32"	63	49

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

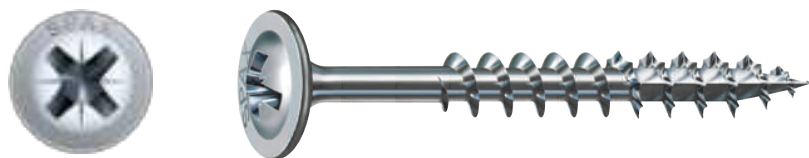
<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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.

## ✱ Cross Recess Rear Panel Wafer Head Zinc

### Specialty Fasteners



### DESCRIPTION

SPAX® Cross Recess Wafer 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 wood panels or backing materials to wood or MDF substrates where countersinking the head is not wanted. The wide heads utilize a large bearing surface which allows for a firm hold on the attachment piece and reduces over-penetration of the head into the wood substrate.

### MATERIALS & COATING

Cold-rolled “carbon steel” wire, heat treated to grade 5 durability 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).



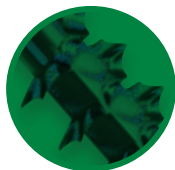
#### Built-on Washer Head

Eliminates the need and cost of a separate washer.



#### Unique 4CUT™ Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented Serrations

Allow for quicker, easier fastening.

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



### TYPICAL INTERIOR APPLICATIONS

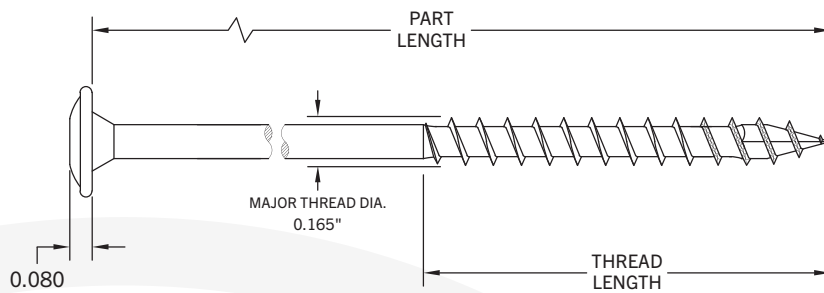
- Attaching thin back panels to bookcases, storage units and cabinetry without deforming or damaging the panel

# ✱ Cross Recess Rear Panel Wafer Head Zinc

## Specialty Fasteners



INTERIOR



### PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#8 x 1-1/4"	Full	0.375"	#2	30	Retail Pax**	10	4281010400302

NOTE: Only sold in master cartons.



Retail Pax®

### FASTENER LENGTH

PART LENGTH	HEAD	FASTENER
#8 x 1-1/4"		

### MASONRY & CONCRETE PRE-DRILL SPECIFICATIONS

NOTE: In masonry/concrete, pre-drill a hole at least 1/4" to 1/2" 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.

SCREW DIAMETER	DRILL BIT	WEIGHT
#8	1/8"	Light



# Cross Recess Rear Panel Wafer Head Zinc

## Specialty Fasteners



### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH ( $W_H$ ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)	W (lbs./inch)	$W_H$ (lbs.)
#8	51	146	83	190	162	319	36	86	48	110	52	131

<sup>1</sup> 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*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup> , $f_y$ (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#8	187,000	460	345

<sup>1</sup> Bending yield strength,  $f_y$ , is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#8 x 1-1/4"	13/16"	7/16"	40	-
#8 x 1-1/4"	25/32"	15/32"	40	33
#8 x 1-1/4"	21/32"	19/32"	42	32

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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.

INTERIOR



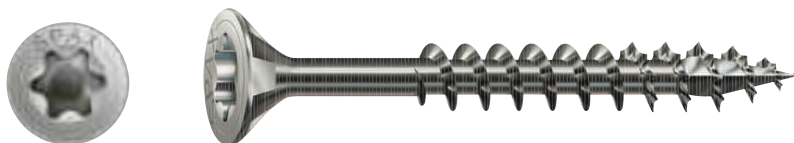


## T-STAR *plus* Flat Head 304 Stainless Steel

### Specialty 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 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<sup>1</sup> lumber for exterior, coastal general construction applications (e.g. AWP A UC1-UC4B, UCFA and UCFB).

EXTERIOR



#### Patented **MULTI-Head**

Countersinks screw head flush with material.

U.S. Patent No. 7,334,976



#### Unique **4CUT™** Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented **Serrations**

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 EXTERIOR APPLICATIONS

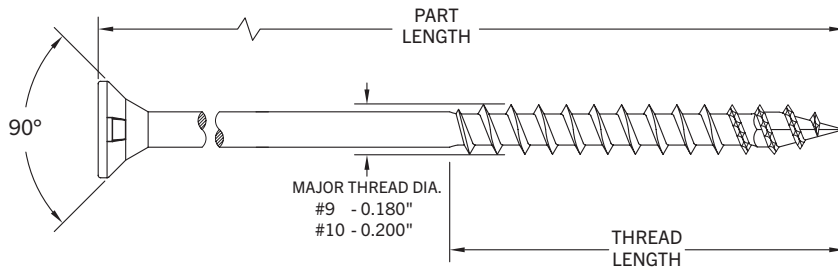
- 2-by framing connections - coastal environment applications
- Deck board finishing installation, especially cedar and redwoods
- Deck railing 2x2 baulster
- Stair treads - treated lumber deck
- Exterior fencing
- Shed construction
- Outdoor furniture

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



# T-STAR *plus* Flat Head 304 Stainless Steel

## Specialty Fasteners



## PRODUCT SELECTION

PART LENGTH	THREAD LENGTH		HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
	FULL	PARTIAL						
#9 x 1-1/2"	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 2-1/2"	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
					340	5 lb. Box	3	4197000500757
					1500	Bulk Pail	N/A	3197000500750

NOTE: Only sold in master cartons.



1 lb. Box



3 lb. Box



5 lb. Box



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.





# T-STAR *plus* Flat Head 304 Stainless Steel

## Specialty Fasteners



### FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#9 x 1-1/2"			#10 x 2-1/2"		
#9 x 2"			#10 x 3"		

### PERFORMANCE SPECIFICATIONS



TER No. 2010-02  
Construction Screw Properties

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

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W <sub>H</sub> ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (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

<sup>1</sup> Tabulated withdrawal and head pull-through design values (W) and (W<sub>H</sub>) are shown at a C<sub>p</sub> = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup> , f <sub>y</sub> (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#9	129,000	395	380
#10	126,000	480	440

<sup>1</sup> Bending yield strength, f<sub>y</sub>, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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 <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#9 x 1-1/2"	3/4"	3/4"	49	67	78
#9 x 2"	1-1/4"	3/4"	62	79	91
#10 x 2-1/2"	1"	1-1/2"	72	92	106
#10 x 3"	1-1/2"	1-1/2"	84	99	108

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain (Z<sub>⊥</sub>) and parallel to grain (Z<sub>||</sub>) orientations.

<sup>6</sup> 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 <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE <sup>1,3,4</sup> , Z (lbf)	
			OSB <sup>5</sup> (0.50)	PLYWOOD <sup>5</sup> (0.39)
#9 x 1-1/2"	1-1/16"	7/16"	57	-
#9 x 1-1/2"	1-1/32"	15/32"	57	50
#9 x 1-1/2"	29/32"	19/32"	56	46
#9 x 1-1/2"	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 x 2"	1-13/32"	19/32"	66	53
#9 x 2"	1-9/32"	23/32"	72	57
#10 x 2-1/2"	2-1/16"	7/16"	68	-
#10 x 2-1/2"	2-1/32"	15/32"	69	59
#10 x 2-1/2"	1-29/32"	19/32"	74	61
#10 x 2-1/2"	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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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.



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<sup>1</sup> lumber for exterior, coastal general construction applications (e.g. AWPA UC1-UC4B, UCFA and UCFB).

EXTERIOR



#### Countersinking Head

Countersinks screw head flush with material.



#### Unique 4CUT™ Point / Patented Serrations

Prevents splitting and requires no pre-drilling in wood.

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



#### 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 baulster
- Stair treads - treated lumber deck
- Exterior fencing
- Shed construction
- Outdoor furniture

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

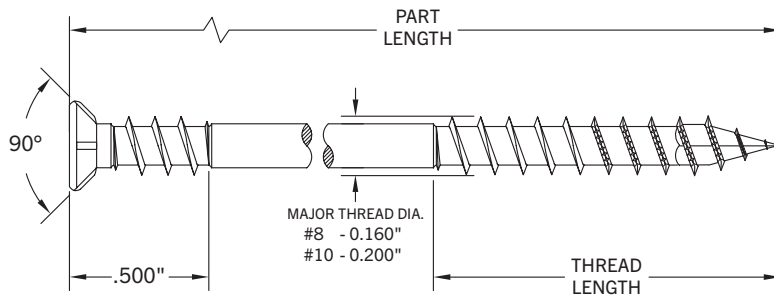




**T-STAR *plus* Trim Head POWERDECK® Stainless Steel**

**Specialty Fasteners**

**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 1-5/8"	N/A	0.700"	0.305"	T20+	170	1 lb. Box	5	45704015401004
					2000	Bulk Pail	N/A	35704015401000
#10 x 2-1/2"	N/A	1.260"	0.310"	T20+	83	1 lb. Box	5	45705008401004
					250	3 lb. Box	3	45705008401045
					415	5 lb. Box	3	45705008401007
					1500	Bulk Pail	N/A	35705008401000
					66	1 lb. Box	5	45705008402004
#10 x 3"	N/A	1.540"	0.310"	T20+	200	3 lb. Box	3	45705008402045
					330	5 lb. Box	3	45705008402007
					1500	Bulk Pail	N/A	35705008402000
					57	1 lb. Box	5	45705008403004
#10 x 3-1/2"	N/A	1.610"	0.310"	T20+	175	3 lb. Box	3	45705008403045
					285	5 lb. Box	3	45705008403007
					1500	Bulk Pail	N/A	35705008403000

NOTE: Only sold in master cartons.



1 lb. Box



3 lb. Box



5 lb. Box



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 1-5/8"			#10 x 3"		
#10 x 2-1/2"			#10 x 3-1/2"		

## PERFORMANCE SPECIFICATIONS


 TER No. 2010-02  
Construction Screw Properties

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

DIAMETER	ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (W <sub>H</sub> ) <sup>1,2</sup>											
	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	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH	WITHDRAWAL	HEAD PULL-THROUGH
	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (lbs.)	W (lbs./inch)	W <sub>H</sub> (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

<sup>1</sup> Tabulated withdrawal and head pull-through design values (W) and (W<sub>H</sub>) are shown at a C<sub>D</sub> = 1.0. Tabulated withdrawal and head pull-through values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>2</sup> Full withdrawal strength is calculated by multiplying the length of thread embedded in the main member by the tabulated reference withdrawal values.

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>1</sup> , f <sub>y</sub> (psi)	ALLOWABLE STEEL STRENGTH (lbs)	
		TENSILE	SHEAR <sup>2</sup>
#8	110,000	355	340
#10	129,000	485	455

<sup>1</sup> Bending yield strength, f<sub>y</sub>, is determined in accordance with *ASTM F1575* using minor thread diameter when fastener is tested in thread section.

<sup>2</sup> 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 <sup>4,5,6</sup> , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION <sup>1</sup> (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY <sup>2,3</sup> )		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 1-5/8"	7/8"	3/4"	49	65	71
#10 x 2-1/2"	1"	1-1/2"	82	103	118
#10 x 3"	1-1/2"	1-1/2"	100	117	128
#10 x 3-1/2"	1-1/2"	1-1/2"	100	117	128

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

<sup>1</sup> Penetration depth includes the length of tapered tip.

<sup>2</sup> The species applies to both the main and the side members. Where the Members are different specific gravities, use the lower of the two.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Lateral design values apply to both perpendicular grain (Z<sub>⊥</sub>) and parallel to grain (Z<sub>||</sub>) orientations.

<sup>6</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS 11.3.1*.


**Specialty Fasteners**

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

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

<sup>1</sup> 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.

<sup>2</sup> Penetration depth includes the length of the tapered tip.

<sup>3</sup> Lateral design values apply to both perpendicular to grain ( $Z_{\perp}$ ) and parallel to grain ( $Z_{\parallel}$ ) orientations.

<sup>4</sup> Tabulated lateral design values shall be adjusted by all applicable adjustment factors per *NDS Table 11.3.1*.

<sup>5</sup> 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* Trim Head POWERTRIM® White & Yellow HCR Finishing Screws

### Specialty Fasteners

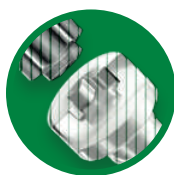


### DESCRIPTION

SPAX® T-STAR *plus* Trim Head fasteners with 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 to grade 5 durability and coated with a 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 *plus* 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.



#### Patented Serrations

Allow for quicker, easier fastening.

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

INTERIOR / EXTERIOR



### TYPICAL APPLICATIONS

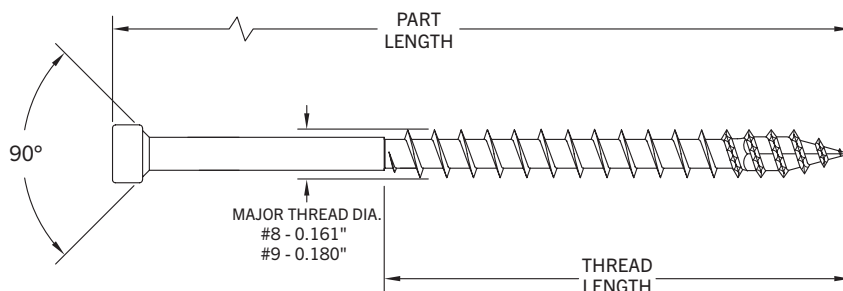
- Window and door casing attachment
- Crown molding
- Baseboards
- Door jams
- Cabinetry
- Fine carpentry
- Stairs and railings



# T-STAR *plus* Trim Head POWERTRIM® White & Yellow HCR Finishing Screws



## Specialty Fasteners



## PRODUCT SELECTION

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	COATING	PART NO.
#8 x 1-1/4"	0.750"	0.197"	T10+	100	Contractor Pax®	5	Yellow HCR	42318704003268
				425	Mini Pail	3	Yellow HCR	3231870400328
#8 x 1-1/2"	1.000"	0.197"	T10+	100	Contractor Pax®	5	Yellow HCR	42318704004068
				425	Mini Pail	3	Yellow HCR	3231870400408
#8 x 2"	1.250"	0.197"	T10+	100	Contractor Pax®	5	White HCR	42318304005068
							Yellow HCR	42318704005068
				425	Mini Pail	3	White HCR	3231830400508
							Yellow HCR	3231870400508
#8 x 2-1/2"	1.550"	0.197"	T10+	100	Contractor Pax®	5	White HCR	42318304006068
							Yellow HCR	42318704006068
				425	Mini Pail	3	White HCR	3231830400608
							Yellow HCR	3231870400608
#8 x 3-1/8"	1.950"	0.197"	T10+	100	Contractor Pax®	5	Yellow HCR	42318704003168
				300	Mini Pail	3	Yellow HCR	3231870400318
#9 x 4"*	2.000"	0.236"	T15+	50	Contractor Pax®	5	Yellow HCR	42318704510068
#9 x 5"*	2.000"	0.236"	T15+	50	Contractor Pax®	5	Yellow HCR	42318704512768

NOTE: Only sold in master cartons.

\* Made in Germany.



Contractor Pax®



Mini Pail

INTERIOR / EXTERIOR





## T-STAR *plus* Trim Head POWERTRIM® White & Yellow HCR Finishing Screws

### Specialty Fasteners



### FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
#8 x 1-1/4"			#8 x 3-1/8"		
#8 x 1-1/2"			#9 x 4"		
#8 x 2"			#9 x 5"		
#8 x 2-1/2"					

### PERFORMANCE SPECIFICATIONS



TER No. 2001-01  
POWERTRIM® Screw Properties

ALLOWABLE STEEL STRENGTH			ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (P) DESIGN VALUES <sup>1,2,3,4</sup> (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 3/4" side member thickness for the Flat Head #8 diameter screws, 7/8" for the #9, and 1-1/8" for the #10.



## T-STAR *plus* Trim Head POWERTRIM® White & Yellow HCR Composite (PVC) Screws

### Specialty Fasteners

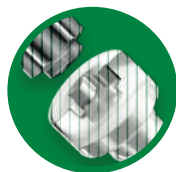


### DESCRIPTION

SPAX® T-STAR *plus* Trim Head fasteners with 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.

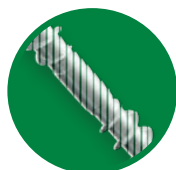
### MATERIALS & COATING

Cold-rolled “carbon steel” wire heat treated to grade 5 durability and coated with a 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 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 *plus* Drive

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



#### Double Reverse Thread

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



#### Patented Serrations

Allow for quicker, easier fastening.  
U.S. Patent No. 7,101,133



#### Unique 4CUT™ Point

Prevents splitting and requires no pre-drilling in wood.

INTERIOR / EXTERIOR



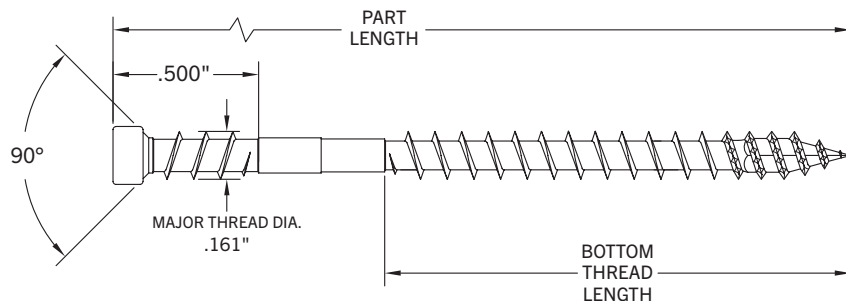
### TYPICAL APPLICATIONS

- 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



## T-STAR *plus* Trim Head POWERTRIM® White & Yellow HCR Composite (PVC) Screws

### Specialty Fasteners



### 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
							Yellow HCR	42418704005068
				425	Mini Pail	3	White HCR	3241830400508
							Yellow HCR	3241870400508
#8 x 2-1/2"	1.550"	0.197"	T10+	100	Contractor Pax®	5	White HCR	42418304006068
							Yellow HCR	42418704006068
				425	Mini Pail	3	White HCR	3241830400608
							Yellow HCR	3241870400608
#8 x 3-1/8"	1.950"	0.197"	T10+	100	Contractor Pax®	5	Yellow HCR	42418704003168
				300	Mini Pail	3	Yellow HCR	3241870400318

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 3-1/8"		
#8 x 2-1/2"					



## T-STAR *plus* Trim Head POWERTRIM® White & Yellow HCR Composite (PVC) Screws

Specialty Fasteners



### PERFORMANCE SPECIFICATIONS



TER No. 2001-01  
POWERTRIM® Screw Properties

ALLOWABLE STEEL STRENGTH			ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (P) DESIGN VALUES <sup>1,2,3,4</sup> (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 3/4" side member thickness for the Flat Head #8 diameter screws, 7/8" for the #9, and 1-1/8" for the #10.

INTERIOR / EXTERIOR

## **T-STAR Trim Head HCR® Composite Deck Screws**

### **Specialty Fasteners**



### **DESCRIPTION**

SPAX® T-STAR trim head type fasteners with HCR® coating are intended for connections in exterior deck board finishing applications when attaching to treated lumber joists. These fasteners are designed with an uppercut head for preventing mushrooming and also provide a clean finish into composite deck boards.

### **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).



#### **Undercut Head**

Prevents mushrooming and provides a clean finish into composite deck boards.



#### **Type 17 Double Slash Point**

For fast start and prevents splitting.



#### **Reverse Upper Thread**

Clears away excess material.

### **AVAILABLE IN 7 COMMON COMPOSITE DECK BOARD COLORS**



### **TYPICAL EXTERIOR APPLICATIONS**

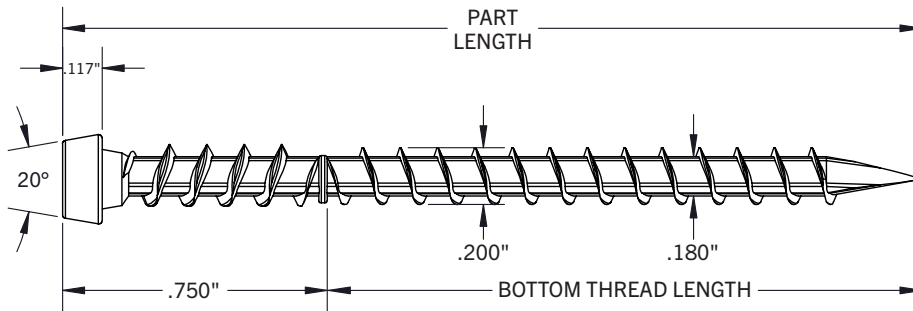
- PVC boards
- Capstock
- Composite deck boards





# T-STAR Trim Head HCR® Composite Deck Screws

## Specialty Fasteners



## PRODUCT SELECTION

PART LENGTH	COLOR	BOTTOM THREAD LENGTH	HEAD SIZE	DRIVE BIT	PKG. TYPE	APPROX. QTY.	MASTER QTY.	PART NO.
#10 x 2-3/4"	JAVA	2"	0.260"	T20	Retail Pax®	75	5	4121500500692
					Project Pax®	350	3	41215005006943
					Bulk Pail	1750	N/A	3121500500690
	DARK BROWN	2"	0.260"	T20	Retail Pax®	75	5	4121530500692
					Project Pax®	350	3	41215305006943
					Bulk Pail	1750	N/A	3121530500690
	SAND	2"	0.260"	T20	Retail Pax®	75	5	4121510500692
					Project Pax®	350	3	41215105006943
					Bulk Pail	1750	N/A	3121510500690
	PEBBLE	2"	0.260"	T20	Retail Pax®	75	5	4121540500692
					Project Pax®	350	3	41215405006943
					Bulk Pail	1750	N/A	3121540500690
	SLATE	2"	0.260"	T20	Retail Pax®	75	5	4121550500692
					Project Pax®	350	3	41215505006943
					Bulk Pail	1750	N/A	3121550500690
	DARK GRAY	2"	0.260"	T20	Retail Pax®	75	5	4121560500692
					Project Pax®	350	3	41215605006943
					Bulk Pail	1750	N/A	3121560500690
	GRAY	2"	0.260"	T20	Retail Pax®	75	5	4121520500692
					Project Pax®	350	3	41215205006943
					Bulk Pail	1750	N/A	3121520500690

Made in Taiwan.



Retail Pax®



Project Pax®




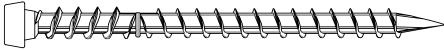
Bulk Pail

## **T-STAR Trim Head HCR® Composite Deck Screws**



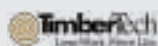
### Specialty Fasteners

#### FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER
#10 x 2-3/4"		

Available in a variety of colors to match all major decking manufacturers.

Color match your deck board!



EXTERIOR

**Notes:**



# 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  $\frac{5}{16}$ ", we mean  $\frac{5}{16}$ "

$\frac{5}{16}$ " **SPAX** =  $\frac{5}{16}$ "

$\frac{5}{16}$ " **COMPETITOR** =  $\frac{1}{4}$ "

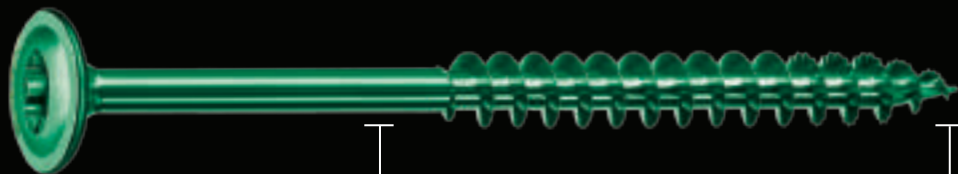
## ENGINEERED TO DO MORE

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

**GRADE-5 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.



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



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?

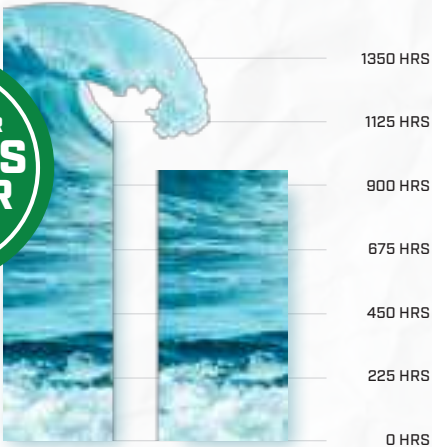
Some competitors don't actually test their coatings. They rely on data from their paint company before it makes it onto their screws.





# TESTED BEYOND THE NORM

We test and inspect beyond all standards to deliver exceptional structural support—from head to point. Push past what's expected with time-tested confidence in every connection.



SPAX

COMPETITORS



**50%**  
**FEWER FASTENERS  
NEEDED**

## BUY LESS. DO MORE.

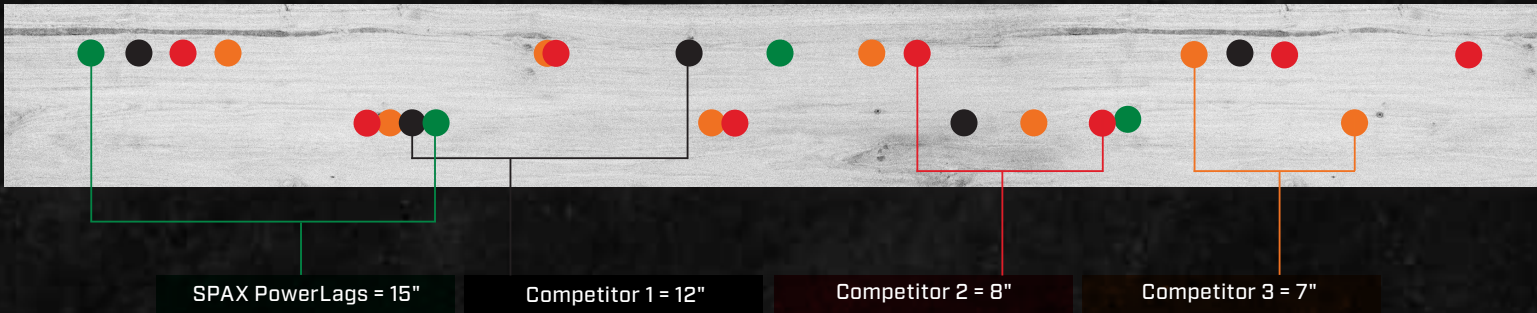
Today's jobs demand time savings without the tradeoff. SPAX PowerLags® require an average of 50% fewer fasteners for ledger board applications compared to competing structural fasteners.

## HOW MANY FASTENERS DOES IT TAKE TO DO THE SAME JOB?

Number of fasteners needed for a 20' ledger



Lag Placement, On-Center Spacing  
per 5' of ledger board per code



**SAVE \$ IN THE AISLE.  
SAVE \$ IN LABOR.**



# 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 AMERICA**

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.

**SPAX DELIVERS THE  
HIGHEST STRUCTURAL  
VALUES IN THE INDUSTRY**



**SPAX** ENGINEERED  
FASTENERS

**#SPAXFACTOR**



# POWERLAGS®

## STRUCTURAL WOOD-TO-WOOD CONNECTIONS



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

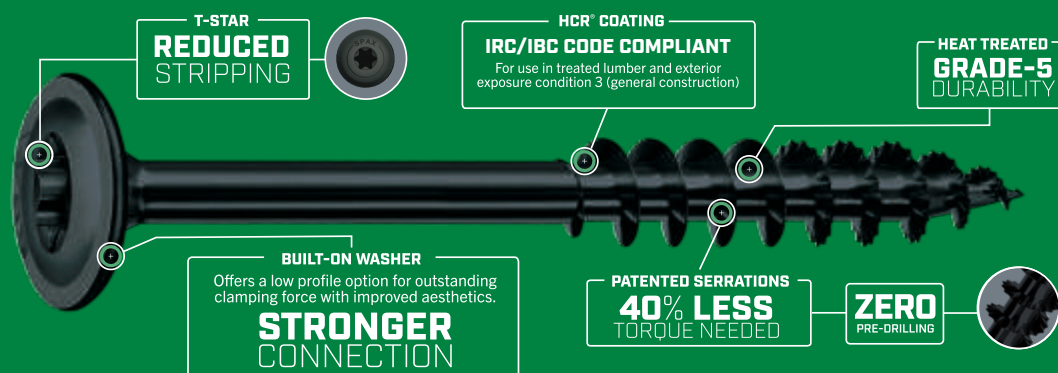
### POWERLAGS® FOR STRONG WOOD-TO-WOOD CONNECTIONS

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")
- Grade 5 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).
- Patented thread serrations 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.

### SCREW STYLES

- Hex head style
- T-STAR head style
- Zinc, yellow zinc, coating options for interior applications.
- HCR® (High Corrosion Resistance) coating for exterior use, including treated lumber.





# POWERLAGS®

## STRUCTURAL WOOD-TO-WOOD CONNECTIONS

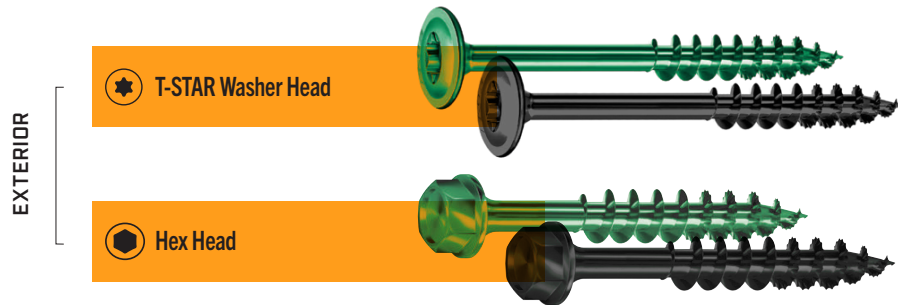


**THE IDEAL REPLACEMENT  
FOR THE CONVENTIONAL LAG**

### Applications

Deck Ledger Attachment  
Heavy Carpentry

Multi-Ply — Sawn Lumber and Engineered Wood  
Treated Lumber — Decks and Pergolas



**We're transitioning  
to Black HCR®!**

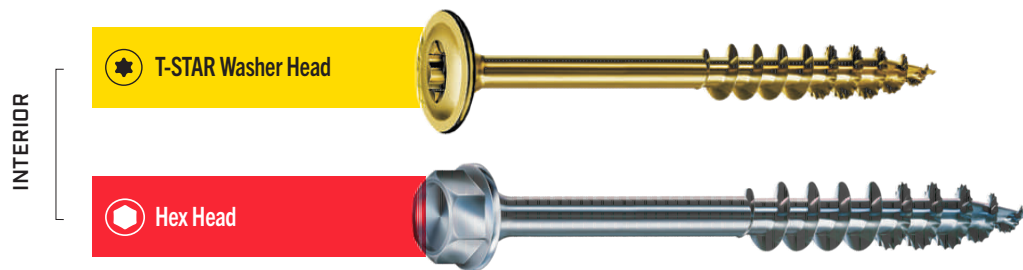


TER No. 1912-07  
Structural Wood  
Fastener Properties

▲ TER No. 1711-01  
Deck Ledger  
Attachment

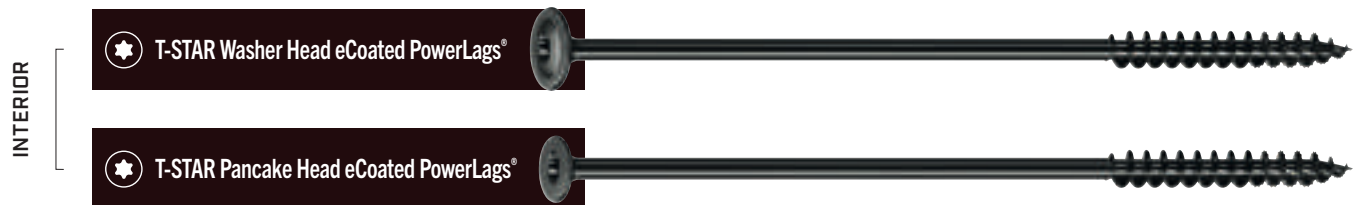
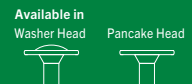
■ TER No. 1802-03  
Multi-ply Sawn  
Lumber Assemblies

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



## PowerLags® for Log Homes

Use for timber frame construction



## Specialty - Interior Truss Screw

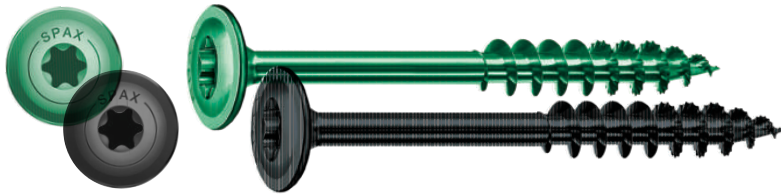
The ideal replacement for Hurricane Clips



◆ TER No. 1910-02  
Trusses Properties &  
Applications

# ★ T-STAR Washer Head HCR®

POWERLAGS®



We're transitioning  
to Black HCR®!



## 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 washer 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 to Grade 5 durability 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.



### Patented Serrations

Allow for quicker, easier fastening.

\*40% lower driving torque.



### Reliable Connections

Heat treated to Grade 5 durability.



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



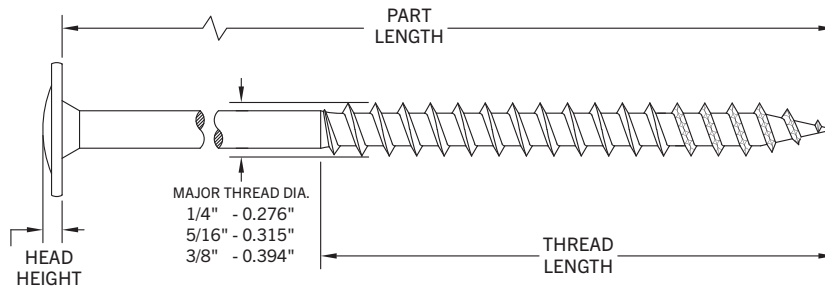


# T-STAR Washer Head HCR®

POWERLAGS®



EXTERIOR



## PRODUCT SELECTION



▲ TER No. 1711-01  
Deck Ledger  
Attachment  
(see pg. 108-109)

■ TER No. 1802-03  
Multi-ply Sawn  
Lumber Assemblies  
(see pg. 110-113)

● TER No. 1802-03  
Multi-ply Engineered Wood  
(LVL, PSL, LSL) Assemblies  
(see pg. 110-113)

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 2-1/2"	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
				500	Bulk Pail	N/A	3581820700760
1/4" x 3-1/2"	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
				500	Bulk Pail	N/A	3581820701000
1/4" x 4-1/2"	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
				500	Bulk Pail	N/A	3581820701270
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
				500	Bulk Pail	N/A	3581820701520

\* Bit not included.

# T-STAR Washer Head HCR®

POWERLAGS®



EXTERIOR

## PRODUCT SELECTION



▲ TER No. 1711-01  
Deck Ledger  
Attachment  
(see pg. 108-109)

■ TER No. 1802-03  
Multi-ply Sawn  
Lumber Assemblies  
(see pg. 110-113)

● TER No. 1802-03  
Multi-ply Engineered Wood  
(LVL, PSL, LSL) Assemblies  
(see pg. 110-113)

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
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 3-1/2" ●	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
				250	Bulk Pail	N/A	3581820801000
5/16" x 4-1/2" ■	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
				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
				250	Bulk Pail	N/A	3581820801520
5/16" x 6-3/4" ●	2.375"	0.776" 0.140"	T40	50	Contractor Pax®	4	4581820801715
				250	Bulk Pail	N/A	3581820801710
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

\* Bit not included.



# T-STAR Washer Head HCR®

POWERLAGS®



ENGINEERED FASTENERS

EXTERIOR

## PRODUCT SELECTION



▲ TER No. 1711-01  
Deck Ledger  
Attachment  
(see pg. 108-109)

■ TER No. 1802-03  
Multi-ply Sawn  
Lumber Assemblies  
(see pg. 110-113)

● TER No. 1802-03  
Multi-ply Engineered Wood  
(LVL, PSL, LSL) Assemblies  
(see pg. 110-113)

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
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®



Bulk Pail



T-STAR Bit

## 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.



# T-STAR Washer Head HCR®

POWERLAGS®



▲ TER No. 1711-01  
Deck Ledger  
Attachment  
(see pg. 108-109)

■ TER No. 1802-03  
Multi-ply Saw  
Lumber Assemblies  
(see pg. 110-113)

● TER No. 1802-03  
Multi-ply Engineered Wood  
(LVL, PSL, LSL) Assemblies  
(see pg. 110-113)

## FASTENER LENGTHS

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 2-1/2"			5/16" x 5" ● ▲		
1/4" x 3"			5/16" x 6" ■		
1/4" x 3-1/2"			5/16" x 6-3/4" ●		
1/4" x 4"			5/16" x 8"		
1/4" x 4-1/2"			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 3-1/2" ●			3/8" x 8"		
5/16" x 4" ▲			3/8" x 10"		
5/16" x 4-1/2" ■					

## PERFORMANCE SPECIFICATIONS



TER No. 1912-07  
Structural Wood Fastener Properties

DIAMETER	LENGTH	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W <sub>H</sub> ), LATERAL SHEAR PARALLEL TO GRAIN (Z <sub>  </sub> ), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z <sub>⊥</sub> ) VALUES <sup>1,2,3,4,5,6,7</sup>											
		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 <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>
		(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

<sup>1</sup> "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per NDS Table 11.3.1.

<sup>2</sup> "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.

<sup>3</sup> "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1-1/2" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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.



**We're transitioning  
to Black HCR!**



## 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 in 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 to Grade 5 durability 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.



### Patented Serrations

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



### Reliable Connections

Heat treated to Grade 5 durability.



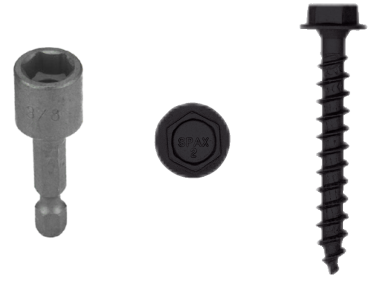
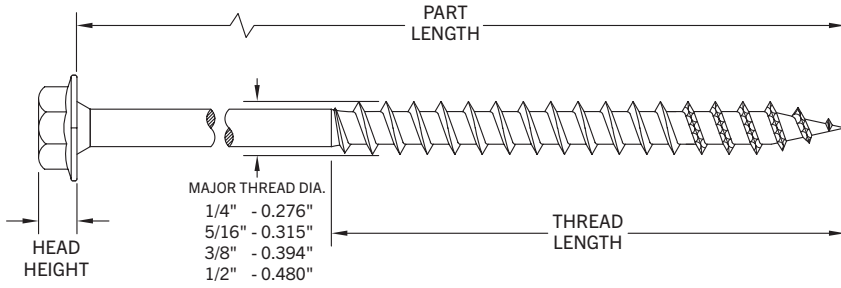
TER No. 1912-07  
Structural Wood  
Fastener Properties



## 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 Head HCR®****POWERLAGS®****ENGINEERED  
FASTENERS****EXTERIOR****PRODUCT SELECTION**TER No. 1711-01  
Deck Ledger Attachment  
(see pg. 108-109)

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 1-1/2"	Full	0.545" 0.210"	3/8"	1	Individual*	50	4571820700407
				12	Project Pax®	5	45718207004043
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
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 3-1/2"	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
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

\* Bit not included.

## PRODUCT SELECTION



TER No. 1711-01  
Deck Ledger Attachment  
(see pg. 108-109)

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
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




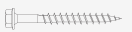


















Hex Driver Bit

## FASTENER LENGTHS



TER No. 1711-01  
Deck Ledger Attachment  
(see pg. 108-109)

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

## FASTENER LENGTHS



TER No. 1711-01  
Deck Ledger Attachment  
(see pg. 108-109)

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
3/8" x 6"			1/2" x 8"		
1/2" x 5"			1/2" x 10"		
1/2" x 6"			1/2" x 12"		

## PERFORMANCE SPECIFICATIONS



TER No. 1912-07  
Structural Wood Fastener Properties

DIAMETER	LENGTH	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W <sub>H</sub> ), LATERAL SHEAR PARALLEL TO GRAIN (Z <sub>  </sub> ), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z <sub>⊥</sub> ) VALUES <sup>1,2,3,4,5,6,7</sup>											
		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 <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>
		(lbs./inch)	(lbs.)	(lb.)	(lb.)	(lbs./inch)	(lbs.)	(lb.)	(lb.)	(lbs./inch)	(lbs.)	(lb.)	(lb.)
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

<sup>1</sup> "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.

<sup>2</sup> "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.

<sup>3</sup> "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1-1/2" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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 Yellow Zinc

POWERLAGS®

**SPAX**®  
ENGINEERED  
FASTENERS



### 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 to grade 5 durability 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.



#### Patented Serrations

Allow for quicker, easier fastening.

\*40% lower driving torque.



#### Reliable Connections

Heat treated to Grade 5 durability.



TER No. 1912-07  
Structural Wood  
Fastener Properties



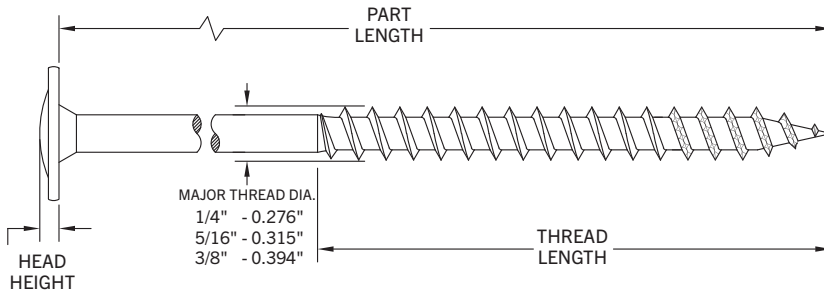
### TYPICAL INTERIOR APPLICATIONS

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



# T-STAR Washer Head Yellow Zinc

POWERLAGS®



## PRODUCT SELECTION



TER No. 1802-03  
Multi-ply Sawn  
Lumber Assemblies  
(see pg. 110-113)

TER No. 1802-03  
Multi-ply Engineered Wood  
(LVL, PSL, LSL) Assemblies  
(see pg. 110-113)

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 2-1/2"	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 3-1/2"	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 4-1/2"	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.

INTERIOR





# T-STAR Washer Head Yellow Zinc

POWERLAGS®








ENGINEERED FASTENERS

## PRODUCT SELECTION



TER No. 1802-03  
Multi-ply Sawn  
Lumber Assemblies  
(see pg. 110-113)

TER No. 1802-03  
Multi-ply Engineered Wood  
(LVL, PSL, LSL) Assemblies  
(see pg. 110-113)

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
5/16" x 2-3/8"	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 3-1/2" 	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 4-1/2" 	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
3/8" x 8"	3.150"	0.970" 0.173"	T50	150	Bulk Pail	N/A	3581021002030
3/8" x 10"	3.150"	0.970" 0.173"	T50	1	Individual*	15	4581021002547
				150	Bulk Pail	N/A	3581021002540

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®



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.

## FASTENER LENGTHS



TER No. 1802-03  
Multi-ply Sawn  
Lumber Assemblies  
(see pg. 110-113)

TER No. 1802-03  
Multi-ply Engineered Wood  
(LVL, PSL, LSL) Assemblies  
(see pg. 110-113)

PART LENGTH	HEAD	FASTENER	PART LENGTH	HEAD	FASTENER
1/4" x 2-1/2"			5/16" x 3-1/2"		
1/4" x 3"			5/16" x 4"		
1/4" x 3-1/2"			5/16" x 4-1/2"		
1/4" x 4"			5/16" x 5"		
1/4" x 4-1/2"			5/16" x 6"		
1/4" x 5"			3/8" x 5"		
1/4" x 6"			3/8" x 6"		
5/16" x 2-3/8"			3/8" x 8"		
5/16" x 3"			3/8" x 10"		

## PERFORMANCE SPECIFICATIONS



TER No. 1912-07  
Structural Wood Fastener Properties

DIAMETER	LENGTH	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W <sub>H</sub> ), LATERAL SHEAR PARALLEL TO GRAIN (Z <sub>  </sub> ), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z <sub>⊥</sub> ) VALUES <sup>1,2,3,4,5,6,7</sup>											
		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 <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>
		(lbs./inch)	(lbs.)	(lb.)	(lb.)	(lbs./inch)	(lbs.)	(lb.)	(lb.)	(lbs./inch)	(lbs.)	(lb.)	(lb.)
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

<sup>1</sup> "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per NDS Table 11.3.1.

<sup>2</sup> "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.

<sup>3</sup> "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1-1/2" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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.



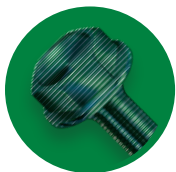
### DESCRIPTION

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 in 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

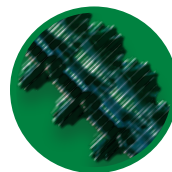
Cold-rolled “carbon steel” wire, heat treated to grade 5 durability and plated with a zinc finish to prevent red rust. “Clear zinc” is tested and recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (e.g. AWPA UC1-UC2).

INTERIOR



#### Built-on Washer Head

Eliminates the need and cost of a separate washer.



#### Patented Serrations

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



#### Reliable Connections

Heat treated to Grade 5 durability.

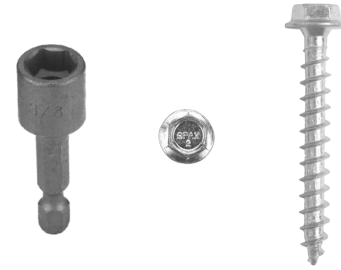
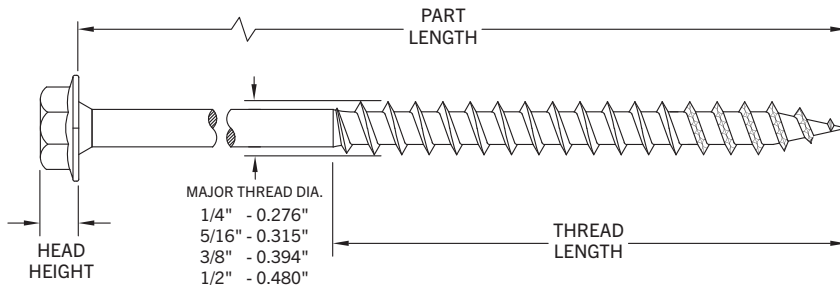


TER No. 1912-07  
Structural Wood  
Fastener Properties



### TYPICAL INTERIOR APPLICATIONS

- Wall mount TV
- Stair landings and framing
- Shelving
- Hex drive is very common in the 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.



### 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 3-1/2"	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 4-1/2"	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.

### 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"	1	Individual*	15	4571010102037
				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
1/2" x 8"	3.150"	0.858" 0.394"	5/8"	100	Bulk Pail*	N/A	3571011202030
1/2" x 10"	3.150"	0.858" 0.394"	5/8"	100	Bulk Pail*	N/A	3571011202540

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 4"		
1/4" x 3"			3/8" x 5"		
1/4" x 3-1/2"			3/8" x 6"		
1/4" x 4"			3/8" x 8"		
1/4" x 4-1/2"			1/2" x 5"		
1/4" x 5"			1/2" x 6"		
1/4" x 6"			1/2" x 8"		
5/16" x 3"			1/2" x 10"		



## PERFORMANCE SPECIFICATIONS



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 ( $Z_{\perp}$ ) VALUES <sup>1,2,3,4,5,6,7</sup>											
		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)	( $W_H$ )	$Z_{  }$	$Z_{\perp}$	(W)	( $W_H$ )	$Z_{  }$	$Z_{\perp}$	(W)	( $W_H$ )	$Z_{  }$	$Z_{\perp}$
		(lbs./inch)	(lbs.)	(lb.)	(lb.)	(lbs./inch)	(lbs.)	(lb.)	(lb.)	(lbs./inch)	(lbs.)	(lb.)	(lb.)
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

<sup>1</sup> "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per NDS Table 11.3.1.

<sup>2</sup> "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.

<sup>3</sup> "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1-1/2" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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

POWERLAGS®



## 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 to grade 5 durability 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 (AWPA UC1-UC2).



### Built-on Washer Head

Eliminates the need and cost of a separate washer.

\*T-STAR drive reduces stripping.



### Patented Serrations

Allow for quicker, easier fastening.

\*40% lower driving torque.



### Reliable Connections

Heat treated to Grade 5 durability.



TER No. 1912-07  
Structural Wood  
Fastener Properties

INTERIOR

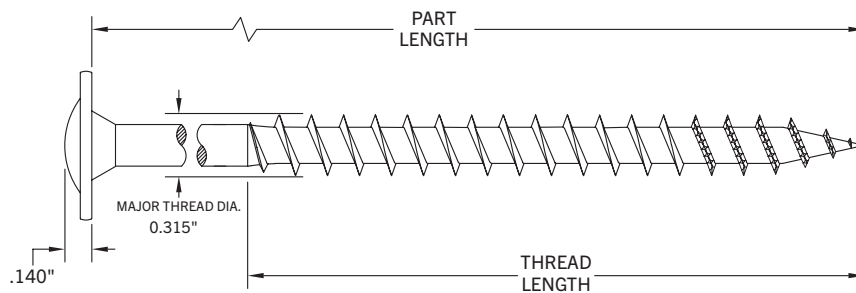


## TYPICAL APPLICATIONS

- 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 Washer Head Black eCoat

POWERLAGS®



## 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.



INTERIOR



# T-STAR Washer Head Black eCoat

POWERLAGS®



## 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"		

INTERIOR

## PERFORMANCE SPECIFICATIONS



TER No. 1912-07  
Structural Wood Fastener Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH ( $W_H$ ), LATERAL SHEAR PARALLEL TO GRAIN ( $Z_{  }$ ), AND LATERAL SHEAR PERPENDICULAR TO GRAIN ( $Z_{\perp}$ ) VALUES <sup>1,2,3,4,5,6,7</sup>											
	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)	( $W_H$ )	$Z_{  }$	$Z_{\perp}$	(W)	( $W_H$ )	$Z_{  }$	$Z_{\perp}$	(W)	( $W_H$ )	$Z_{  }$	$Z_{\perp}$
	(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

<sup>1</sup> "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per NDS Table 11.3.1.

<sup>2</sup> "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.

<sup>3</sup> "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1-1/2" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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

POWERLAGS®



## 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

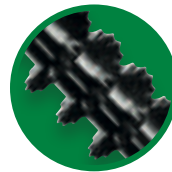
Cold-rolled “carbon steel” wire, heat treated to grade 5 durability and plated with an eCoat finish to prevent red rust. “eCoat” is recognized for use in untreated and above ground contact pressure treated lumber for interior dry/damp general construction applications (AWPA UC1-UC2).

INTERIOR



### Pancake Head

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



### Patented Serrations

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



### Reliable Connections

Heat treated to Grade 5 durability.



TER No. 1912-07  
Structural Wood  
Fastener Properties



## TYPICAL APPLICATIONS

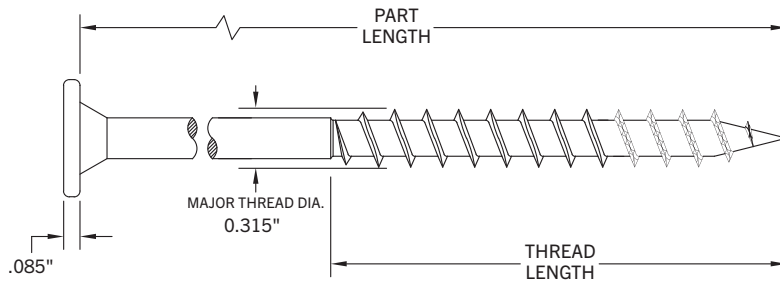
- Log Home & Timber Framing Applications
  - Wall log attachment/assembly (Log Homes)
  - Beams and Engineered Wood connections (Timber Framing)
- General Heavy Construction Applications
  - Job-site built SIP roofing systems
  - Rafter to post connection (Overhanging Porch)
  - Deck ledgers
  - Decorative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





# T-STAR Pancake Head Black eCoat

POWERLAGS®



## 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

INTERIOR

## BIT SELECTION

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

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





# T-STAR Pancake Head Black eCoat

POWERLAGS®



## 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 13"		
5/16" x 14"		
5/16" x 15"		
5/16" x 16"		

INTERIOR

## PERFORMANCE SPECIFICATIONS



TER No. 1912-07

Structural Wood Fastener Properties

DIAMETER	ALLOWABLE WITHDRAWAL (W), HEAD PULL-THROUGH (W <sub>H</sub> ), LATERAL SHEAR PARALLEL TO GRAIN (Z <sub>  </sub> ), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z <sub>⊥</sub> ) VALUES <sup>1,2,3,4,5,6,7</sup>											
	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 <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>	(W)	(W <sub>H</sub> )	Z <sub>  </sub>	Z <sub>⊥</sub>
	(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

<sup>1</sup> "Withdrawal", "Head Pull-Through", and "Lateral Shear" design values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.

<sup>2</sup> "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.

<sup>3</sup> "Withdrawal" design values are from the main member, and "Head Pull-Through" design values are based on a minimum of 1-1/2" side member thickness.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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.



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 to grade 5 durability 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.



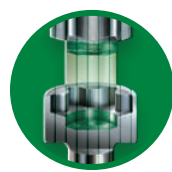
#### Unique 4CUT™ Point

Prevents splitting and requires no pre-drilling in wood.



#### Patented Serrations

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

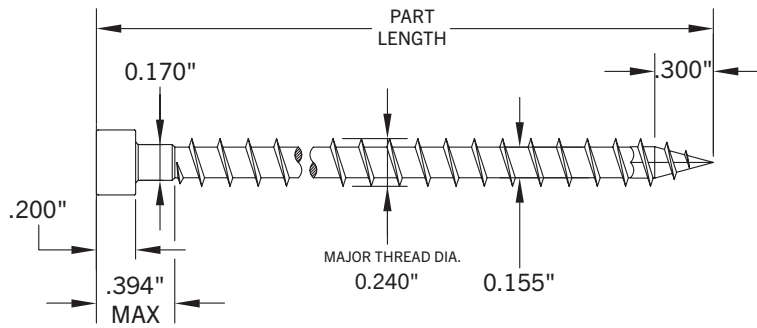
- DrJ TER No. 1910-02
- Truss/Rafter to top wall plate connection
- Ideal replacement for hurricane clips

INTERIOR



# T-STAR *plus* Cylindric Head WIROX®

POWERLAGS®



## PRODUCT SELECTION



TER No. 1910-02  
Trusses Properties & Applications  
(see pg. 114-116)

PART LENGTH	THREAD LENGTH	HEAD SIZE	DRIVE/BIT SIZE	QTY.	PKG. TYPE	MASTER QTY.	PART NO.
#14 x 6-1/4"	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.



## FASTENER LENGTH



TER No. 1910-02  
Trusses Properties & Applications  
(see pg. 114-116)

PART LENGTH	HEAD	FASTENER
#14 x 6-1/4"		

INTERIOR



### PERFORMANCE SPECIFICATIONS



TER No. 1912-07  
Structural Wood Fastener Properties

ALLOWABLE STEEL STRENGTH <sup>1</sup>			ALLOWABLE WITHDRAWAL (W) AND HEAD PULL-THROUGH (P) DESIGN VALUES <sup>2,3,4,5</sup>					
DIAMETER	TENSILE STRENGTH (lbs.)	SHEAR STRENGTH (lbs.)	HEM FIR & SPRUCE-PINE-FIR (0.42)		DOUGLAS-FIR (0.50)		SOUTHERN PINE (0.55)	
			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 6-1/4"	990	750	130	235	130	285	205	285

<sup>1</sup> Shear strength is determined in accordance with *AISI S904* using minor thread diameter when fastener is tested in threaded section.

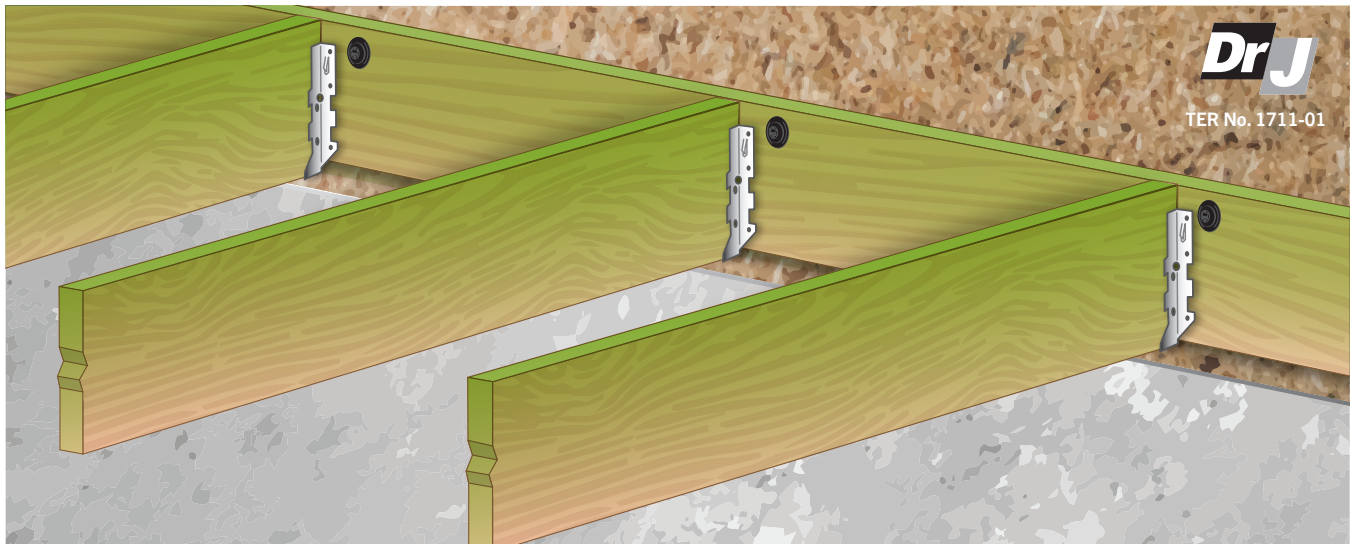
<sup>2</sup> Tabulated pull-through values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.

<sup>3</sup> For wood species with an assigned specific gravity greater than 0.50, use the tabulated values for specific gravity of 0.50.

<sup>4</sup> Tabulated withdrawal values shall be adjusted by all applicable adjustment factors per *NDS* Table 11.3.1.

<sup>5</sup> 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.





### DECK LEDGER FASTENING SOLUTION WITH SPAX® POWERLAGS®

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

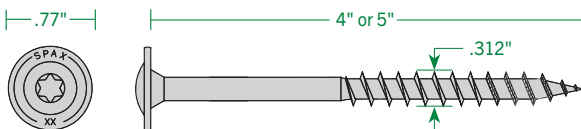
+ 2015 IRC Table R507.2, 2012 IRC Table R507.2

#### PRODUCT FEATURES

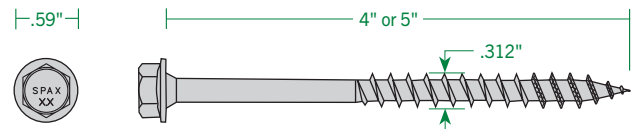
- Code compliant per DrJ TER No. 1711-01.
- Patented thread technology requires no pre-drilling, and drives faster and easier than conventional lag screws.
- Two head types to choose from:
  - Hex Washer Head
  - T-STAR Washer Head
- HCR® Coating has been tested to ICC-ES standards (AC257) and has proven to be equivalent to code approved hot-dip galvanized coatings. HCR is suitable for many preservative-treated woods and exterior applications.
- 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 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 2 and Table 1.



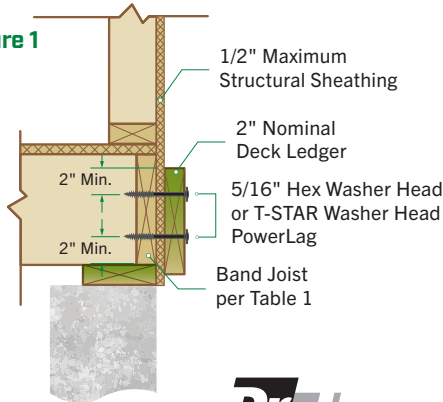
5/16" x 4" or 5" T-STAR Washer Head  
PowerLag® with HCR® Coating



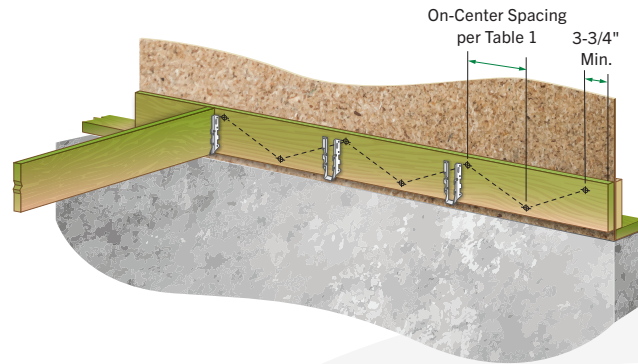
5/16" x 4" or 5" Hex Washer Head  
PowerLag® with HCR® Coating

## Structural Applications

**Figure 1**



**Figure 2**



TER No. 1711-01

**Table 1**

Loading Condition	Head Type	Fastener Length	2x Nominal Ledger Species	Band Joist Material	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 of PowerLags® Fasteners							
40 psf Live	T-STAR Washer	4" or 5"	HF/SPF	Sawn Lumber	22	16	16	15	12	11	10	
				1" min EWP*	23	17	16	15	13	11	10	
			DF/SP	Sawn Lumber	34	25	20	17	13	12	10	
				1" min EWP*	23	17	16	14	12	11	9	
10 psf Dead	Hex Washer		HF/SPF	Sawn Lumber	28	21	17	12	11	9	8	
				1" min EWP*	21	14	11	9	8	7	6	
			DF/SP	Sawn Lumber	30	22	18	12	10	9	8	
				1" min EWP*	26	19	16	13	11	10	8	
60 psf Live	T-STAR Washer		HF/SPF	Sawn Lumber	16	16	12	10	9	8	7	
				1" min EWP*	16	16	13	11	9	8	7	
			DF/SP	Sawn Lumber	24	18	13	11	9	8	7	
				1" min EWP*	16	15	12	10	9	7	7	
	10 psf Dead		Hex Washer	HF/SPF	Sawn Lumber	20	13	11	9	7	6	6
					1" min EWP*	14	10	8	7	6	5	4
				DF/SP	Sawn Lumber	21	13	10	8	7	6	5
					1" min EWP*	18	14	11	9	8	7	6

\*Engineered Wood Product (EWP)

- Based on load duration of 1.0. Spacing may be adjusted by the applicable load duration as specified in NDS 2018.
- Fasteners are required to have full thread penetration into the main member.
- Fasteners shall be staggered from the top to the bottom along the length of the ledger while maintaining the required edge and end distances as shown in Figures 1 and 2.
- A maximum 1/2" structural sheathing, fastened per code, may be installed between the ledger and the band joist.
- Multiple ledger plies shall be fastened together per code and independent of the 5/16" PowerLags<sup>®</sup>.
- Minimum ledger board requirements: 1-1/2" thick by 7-1/2" depth. Must be greater than or equal to the depth of the deck joist and no greater than the depth of the band joist.
- Solid sawn ledger shall be HF/SPF or DF/SP species (specific gravity of 0.42 and 0.50 respectively), designed by others.
- Ledger materials assumed to be in wet service condition.
- Minimum band joist requirements: SPF (specific gravity of 0.42) solid-sawn lumber 1-1/2" thick and 7-1/2" depth; Engineered Wood Product (EWP) 1" thick by 7-1/4" depth.
- Fastener spacing for 4" fasteners is based on tested loads. The design values use the lesser of a 1/8" deflection or a factor of safety equivalent to or greater than that of the code compliant lag screw application.
- Fastener spacing for 5" fasteners is based on previously published reference lateral design values.
- Tabulated on-center spacing values are applicable where a third party tested plastic washer (e.g. Deck2Wall<sup>®</sup> 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<sup>®</sup> and three 3/16" (approx.) holes for the #8 screws. The plastic washer shall be independently fastened to the ledger with three SPAX<sup>®</sup> #8 x 1-5/8" or three SPAX<sup>®</sup> #8 x 2" screws.

- For guidance on designing a deck ledger to truss connection where a band joist is not used, see SBCE's Tech Note, "Attachment of Residential Deck Ledger to Metal Plate Connected Wood Truss Floor System" available at [www.sbcindustry.com](http://www.sbcindustry.com).
- Attachment of a deck ledger to concrete or CMU/masonry using PowerLags<sup>®</sup> 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](http://www.spax.us).
- For a comprehensive review of SPAX PowerLags<sup>®</sup> for use in deck ledger attachment, please see "DrJ TER No. 1711-01" available at [www.drjengineering.com](http://www.drjengineering.com).



**DrJ**

TER No. 1802-03

### MULTI-PLY FASTENING SOLUTION WITH SPAX® POWERLAGS®

SPAX® 5/16" PowerLags® have been evaluated for single-side fastening of sawn lumber and engineered wood beams. When installed per this technical bulletin, SPAX® 5/16" PowerLags® can be used to confidently join and secure LVL, PS�, LSL, and Sawn Lumber multi-ply beams that can be loaded on both the head and point side of the fastener.

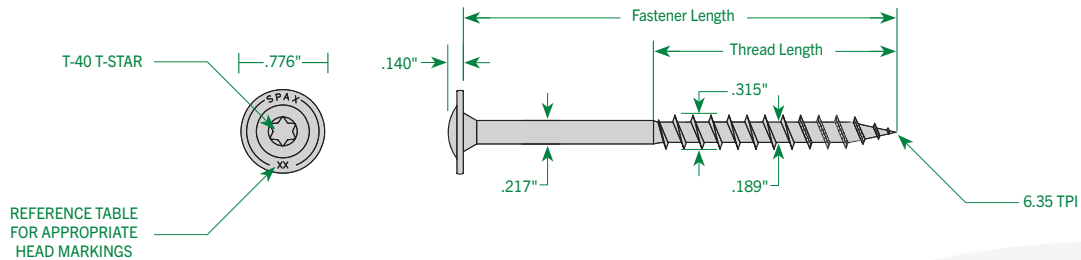
#### PRODUCT FEATURES

- Code listed per DrJ TER No. 1802-03.
- Patented thread technology requires no pre-drilling, and drives faster and easier than conventional lag screws.
- T-STAR Washer Head for a slim, low revealing head option.
- 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 on head provides easy identification.

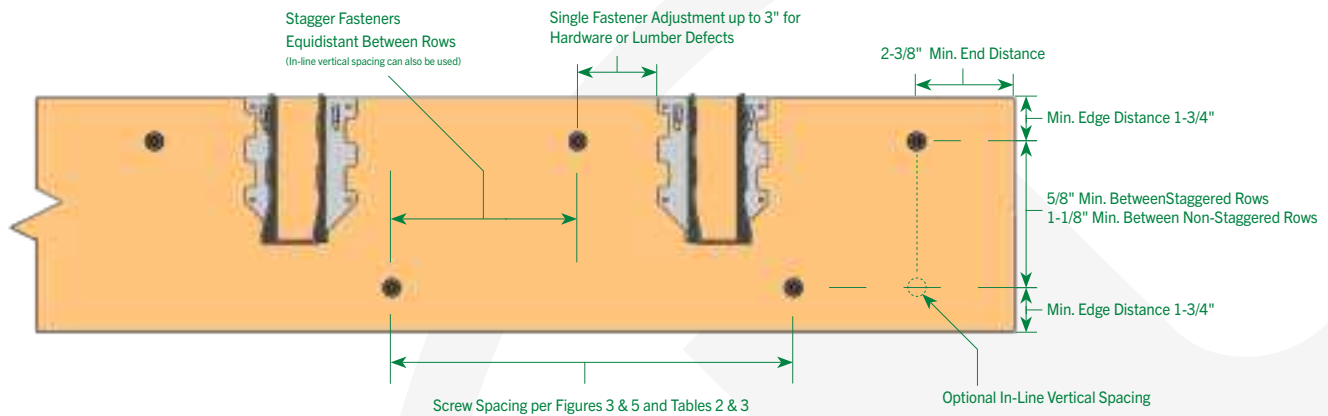
#### INSTALLATION INSTRUCTIONS

- 1) Select the proper length fastener according to Figures 4 & 6 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 a low rpm/high torque electric drill and T-40 driver bit. 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.
- 3) Drive the fastener until the head is drawn firm and flush and all plies are drawn tightly together. Do not overdrive or countersink.
- 4) Install fasteners in either 2 or 3 rows (staggered or in-line) per Tables 2 & 3. For top loaded beams, refer to Figures 2 & 3. Individual screw locations may be adjusted up to 3" to avoid hardware or lumber defects.

**Figure 1: SPAX 5/16" T-STAR Washer Head Fastener**



**Figure 2: Minimum Spacing Requirements**



**Table 1: SPAX® 5/16" PowerLags® Fastener Specifications and Strength Details**

Fastener Name	Head					Fastener Length (in)	Shank Diameter (in)	Thread Length (in)	Thread Diameter (in)		Nominal Bending Yield, (psi)
	Style	Drive Type / Size	Marking	Diameter (in)	Thickness (in)				Minor	Major	
PowerLags® (5/16")	T-STAR Washer	T-40	3	0.776"	0.140"	3"	0.217"	1.650"	0.189"	0.315"	150,000
			3.5			3-1/2"		2.050"			
			4.5			4-1/2"		2.375"			
			5			5"					
			6			6"					
			6.7			6-3/4"					

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. 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.

4. Fastener dimensions are as measured on uncoated fasteners.

### MULTI-PLY SAWN LUMBER ASSEMBLIES

Figure 3: Top Loaded Beams



Figure 4: SPAX® 5/16" PowerLags® Fastener Assemblies for Truss and Sawn Lumber

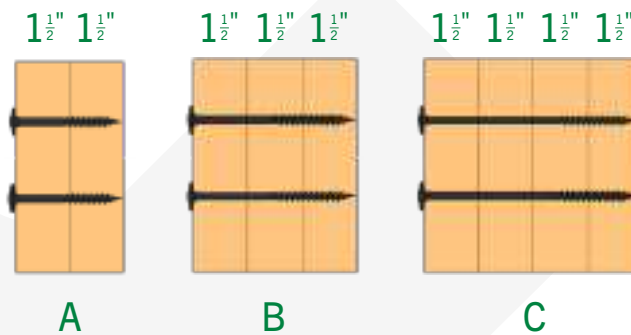


Table 2: SPAX® 5/16" PowerLags® Fastener Allowable Design Values [plf] for Multi-Ply Truss and Sawn Lumber Assemblies

Multiple Members		Nominal Fastener Length <sup>1,2</sup> (in.)	Loaded Side <sup>5,6</sup>	DF-L/SP (0.50)						SPF/HF (0.42)					
				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 1-1/2"	3"	Either	1710	2565	1285	1930	855	1285	1410	2115	1060	1590	705	1060
B	3-ply 1-1/2"	4.5"	Either	1710	2655	1330	1995	885	1330	1530	2295	1150	1725	765	1150
C	4-ply 1-1/2"	6"	Either	1575	2365	1185	1780	790	1185	1360	2040	1025	1540	680	1020

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.

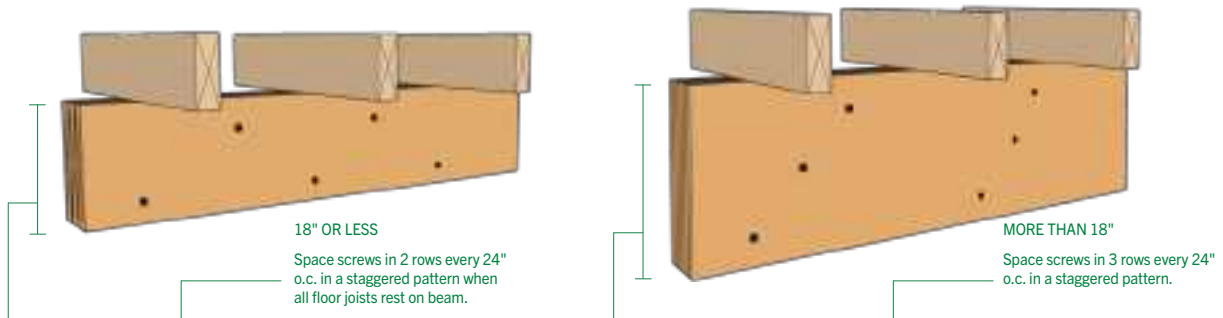
5. The tabulated allowable design loads may be applied to either side of the beam (head or point side of fastener). Where loads are applied to both sides of the beam simultaneously, the total load applied to the beam shall not exceed the tabulated load.

6. All design values are also applicable to top-loaded assemblies with even loading across the width of the entire assembly. For top-loaded members, fasteners shall be installed in two (2) rows with a maximum distance of 32" o.c. between fasteners in the same row.

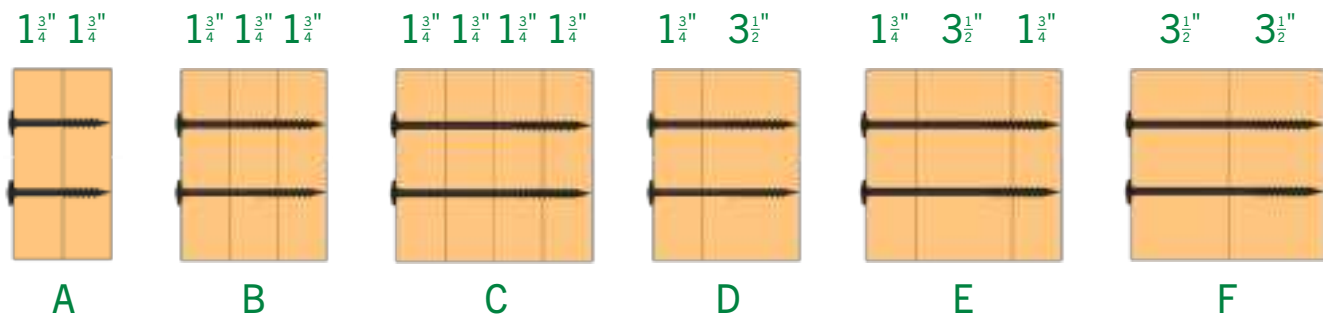


### MULTI-PLY ENGINEERED WOOD ASSEMBLIES

**Figure 5 : Top Loaded Beams**



**Figure 6: SPAX® 5/16" Powerlags® Fastener Assemblies for Engineered Wood**



**Table 3: SPAX® 5/16" PowerLags® Fastener Allowable Design Values [plf] for Multi-Ply Engineered Wood [LVL, PSL, LSL] Assemblies**

Multiple Members		Nominal Fastener Length <sup>1,2</sup> (in.)	Loaded Side <sup>5,6</sup>	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 1-3/4"	3.5"	Either	2175	3265	1635	2455	1090	1635
B	3-ply 1-3/4"	5"	Either	1770	2655	1330	1995	885	1330
C	4-ply 1-3/4"	6.75"	Either	1575	2365	1185	1780	790	1185
D	2-ply 1-3/4" & 3-1/2"	5"	Either	1770	2655	1330	1995	885	1330
E	3-ply 1-3/4" & 3-1/2"	6.75"	Either	1575	2365	1185	1780	790	1185
F	2-ply 3-1/2"	6.75"	Either	2360	3540	1775	2665	1180	1770

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.

5. The tabulated allowable design loads may be applied to either side of the beam (head or point side of fastener). Where loads are applied to both sides of the beam simultaneously, the total load applied to the beam shall not exceed the tabulated load.

6. All design values are also applicable to top-loaded assemblies with even loading across the width of the entire assembly. For top-loaded members up to 18" deep, fasteners shall be installed in two (2) rows with a maximum distance of 24" o.c. between fasteners in the same row. Use three (3) rows for members deeper than 18".

\* 2018 IRC Table R507.2, 2015 IRC Table R507.2, 2012 IRC Table R507.2



### 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.

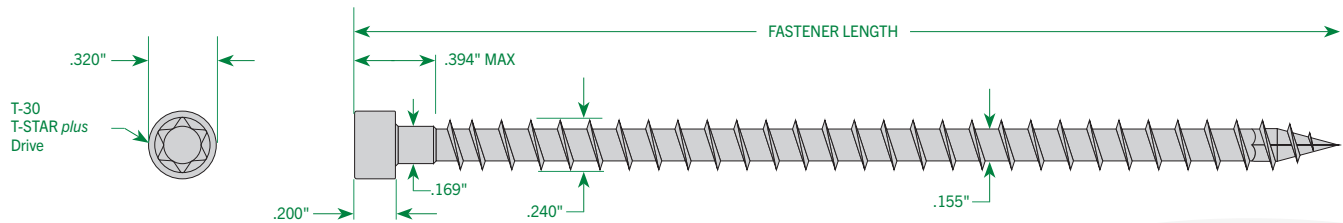
#### PRODUCT FEATURES

- Code listed per DrJ TER No. 1910-02.
- Patented 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 T-30 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 <sup>3</sup> , $f_{yb}$ (psi)	Allowable Steel Strength (lb)	
	Style	Marking	Diameter	Height	Fastener <sup>1</sup>	Thread <sup>2</sup>	Shank	Minor	Major		Tensile	Shear <sup>4</sup>
#14 x 4-3/4"	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 6-1/4"					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).

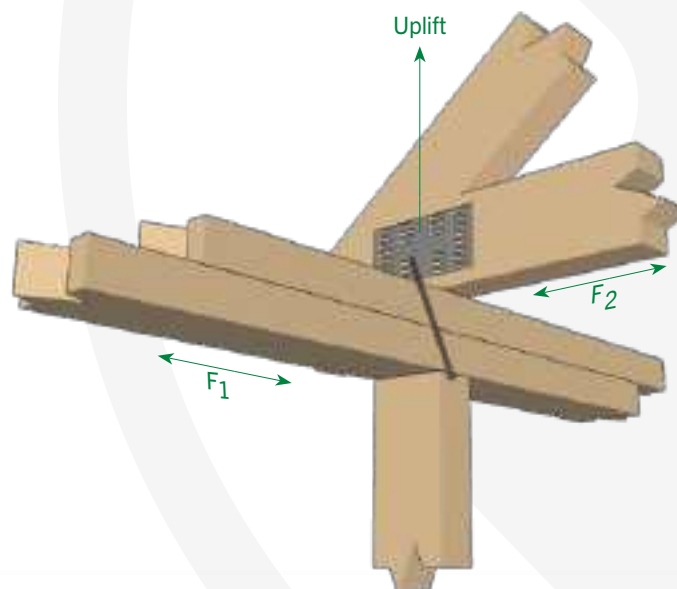
3. Bending yield strength,  $F_{yb}$ , is determined in accordance with ASTM F1575 using minor thread diameter when fastener is tested in threaded section.

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.

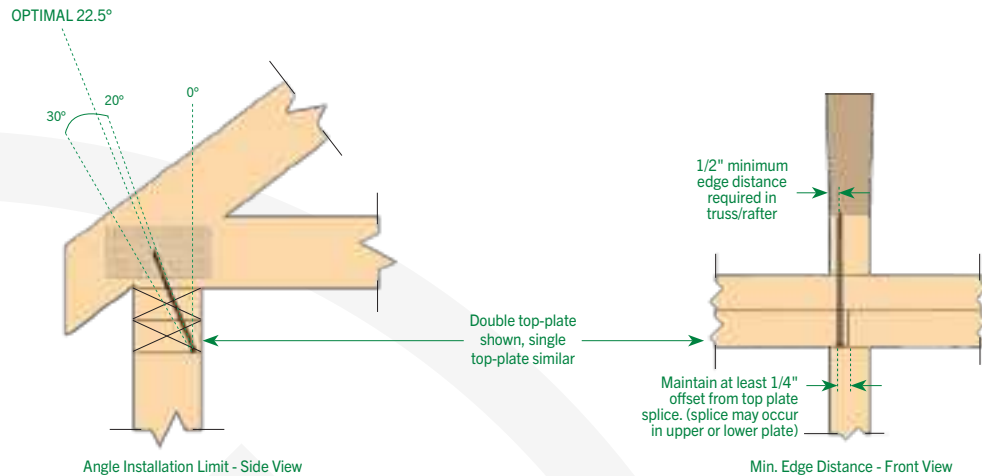
## TRUSS/RAFTER/JOIST TO TOP PLATE CONNECTION

**Figure 2: Uplift & Lateral Load ( $F_1$  and  $F_2$ ) Directions (Single and Double Top Plate Applications)**

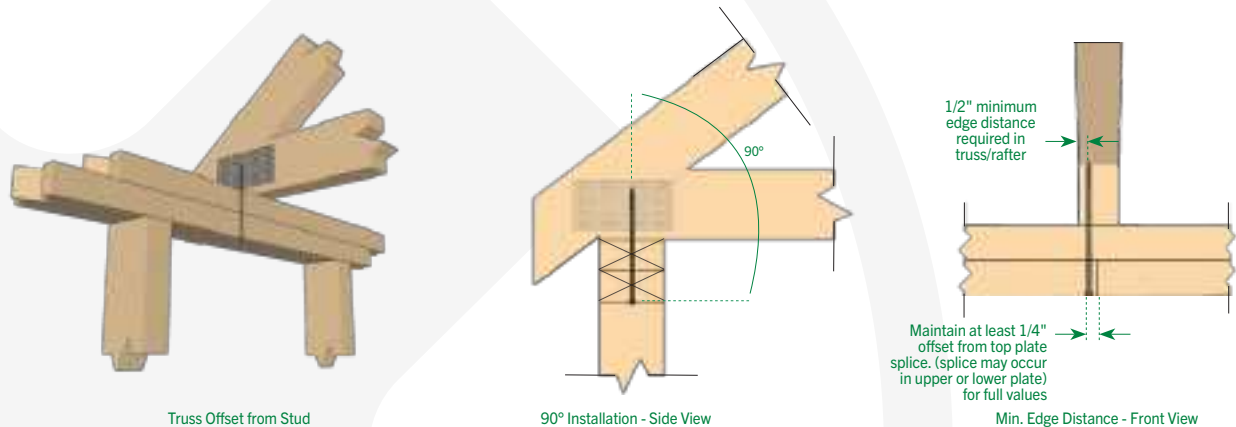


## TRUSS/RAFTER/JOIST TO TOP PLATE CONNECTION (CONT.)

**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/Joist¹ (in)	Top Plate(s)	Fastener Angle to Vertical⁷	Allowable Loads²,³,⁴,⁵,⁶ (lb)					
				DF-L/SP (0.50)			SPF/HF (0.42)		
				Uplift	F1	F2	Uplift	F1	F2
4.75"	2-1/2"	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.

# ACCESSORIES

## SPAX® Bit Center



### UNIDRIVE: #2 Phillips / #2 Square

Part Number: 5000009190009

Size: 1" - 1/4" hex

Use with SPAX® Multi-Material screws: #8, #10, and #12

Mfg. Origin: Taiwan

Only sold in master cartons of 10.



### T-STAR plus: T20 plus

Part Number: 5000009185209

Size: 1" - 1/4" hex

Use with SPAX® Multi-Material screws: #8, #9, and #10

Mfg. Origin: Taiwan

Only sold in master cartons of 10.



### T-STAR plus: T30 plus

Part Number: 5000009185309

Size: 1" - 1/4" hex

Use with SPAX® Multi-Material screws: #14

Mfg. Origin: Taiwan

Only sold in master cartons of 10.



### T-STAR plus: T20 plus (2 pack)

Part Number: 5000009285209

Size: 2" - 1/4" hex

Use with SPAX® Multi-Material screws: #8, #9, and #10

Mfg. Origin: Taiwan

Only sold in master cartons of 10.



### T-STAR plus: T30 plus (2 pack)

Part Number: 5000009285309

Size: 2" - 1/4" hex

Use with SPAX® Multi-Material screws: #14

Mfg. Origin: Taiwan

Only sold in master cartons of 10.



### T-STAR: T30

Part Number: 5000002016309

Size: 1" - 1/4" hex

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

Mfg. Origin: Taiwan

Only sold in master cartons of 10.



### T-STAR: T40

Part Number: 5000002016409

Size: 1" - 1/4" hex

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

Mfg. Origin: Taiwan

Only sold in master cartons of 10.



### T-STAR: T50

Part Number: 5000002016509

Size: 1" - 1/4" hex

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

Mfg. Origin: Taiwan

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
- Color coded bands to help find bits quickly



# ACCESSORIES

## PLASTI-GRIP® ci Prong Insulation Washer

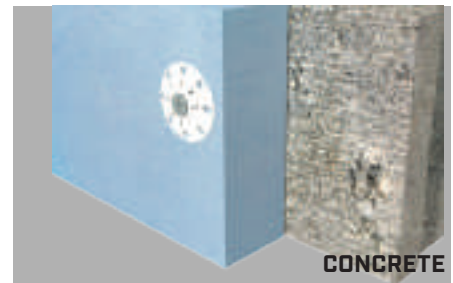


### FOR RIGID INSULATION ATTACHMENT TO WOOD, STEEL, OR CONCRETE.

The SPAX® 1-3/4" 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
- 1-3/4" 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
	100	Mini Pail	3	5019600517508
	400	Bulk Pail	N/A	3019677517500

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



Contact SPAX® Sales for more information about this rack display.



# ACCESSORIES

## THERMAL-GRIP® Flat Plastic Washer

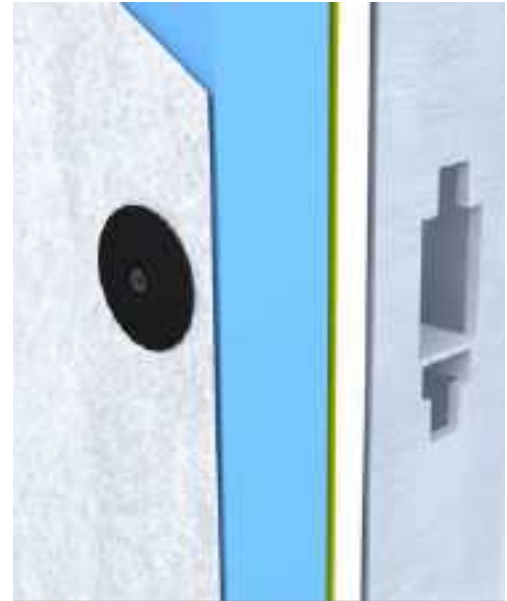


### FOR ATTACHING COMMERCIAL BUILDING WRAP APPLICATIONS.

- 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



## GRIP-PLATE® Galvanized Steel Washer

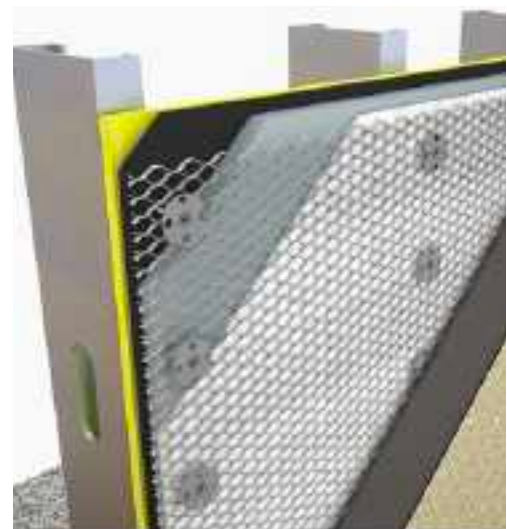


### FOR ATTACHING LATH AND PLASTER.

- 1-1/4" 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



## DECK BOARD SPACERS

Part No. 5100007193091

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



## DECK JOIST & BEAM TAPE

Joist Tape Part No. 5100007193071

Beam Tape Part No. 5100007193081

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



## COMPOSITE DECK SCREWS

(pg. 72-74)

SPAX® T-STAR trim head type fasteners with HCR® coating are intended for connections in exterior deck board finishing applications when attaching to treated lumber joists.

- Available in 7 common composite deck board colors
- Reverse upper thread clears away excess material
- Ideal fastener length for use with 1" and 2" nominal thickness boards
- Tri-lobe shank prevents cracking or splitting of deck boards







## MORE FASTENERS FOR YOUR DECK

### HCR-X™ MULTI-MATERIAL FASTENERS

(pg. 39-49)

T-STAR *plus* Flat Head and Wafer Head fasteners with HCR-X™ coating are designed for use in multiple material connections often found outside residential dwellings. These “work horse” construction fasteners are designed to countersink in treated lumber for a clean-flush finish and provides a quick and easy installation.

### POWERDECK® STAINLESS STEEL FASTENERS

(pg. 58-65)

T-STAR *plus* Flat Head and POWERDECK® Trim Head Stainless Steel fasteners are designed for use in exterior wood connections often found outside residential domains and 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.

### DECORATIVE HCR® POWERLAGS®

(pg. 82-90)

T-STAR Washer Head and Hex Head PowerLags® with HCR® coating are intended for wood-to-wood connections in exterior structural applications when attaching treated lumber components. Ideal for deck ledger attachment and multi-ply beam applications.



TER No. 1711-01  
Deck Ledger Attachment

### POWERTRIM® WHITE HCR® FASTENERS

(pg. 66-71)

T-STAR *plus* Trim Head fasteners with white HCR® 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.

# Competitor Size Cross Reference

GRK to SPAX®



GRK Part #	GRK Description	GRK PKG/CT	SPAX® Part #	SPAX® Description	SPAX® PKG/CT
10133	10 x 2-1/2" RSS Structural Screw	1000	3281670500600	10 x 2-1/2" Multi-Purpose T20+ Wafer Head HCR-X™ Pail	1200
12133	10 x 2-1/2" RSS Structural Screw	50	4281670500604	10 x 2-1/2" Multi-Purpose T20+ Wafer Head HCR-X™ 1LB	77
10137	10 x 3-1/8" RSS Structural Screw	800	3281670500750	10 x 3" Multi-Purpose T20+ Wafer Head HCR-X™ Pail	1000
11137	10 x 3-1/8" RSS Structural Screw	236	N/A	N/A	N/A
12137	10 x 3-1/8" RSS Structural Screw	50	4281670500754	10 x 3" Multi-Purpose T20+ Wafer Head HCR-X™ 1LB	63
10151	1/4" x 1-1/2" RSS Structural Screw	1000	N/A	N/A	N/A
12151	1/4" x 1-1/2" 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 2-1/2" RSS Structural Screw	700	N/A	N/A	N/A
10161	1/4" x 3-1/8" RSS Structural Screw	500	N/A	N/A	N/A
12161	1/4" x 3-1/8" RSS Structural Screw	50	N/A	N/A	N/A
10217	5/16" x 2-1/2" RSS Structural Screw	600	3581820700630	1/4" x 2-1/2" PowerLags® T-STAR Washer Head HCR® Pail	500
12217	5/16" x 2-1/2" RSS Structural Screw	100	4581820700635	1/4" x 2-1/2" PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
10219	5/16" x 2-3/4" RSS Structural Screw	500	N/A	N/A	N/A
12219	5/16" x 2-3/4" RSS Structural Screw	100	N/A	N/A	N/A
10221	5/16" x 3-1/8" RSS Structural Screw	500	3581820700760	1/4" x 3" PowerLags® T-STAR Washer Head HCR® Pail	500
12221	5/16" x 3-1/8" RSS Structural Screw	100	4581820700765	1/4" x 3" PowerLags® T-STAR Washer Head HCR® Contractor Pax®	50
14221	5/16" x 3-1/8" RSS Structural Screw	25	45818207007643	1/4" x 3" PowerLags® T-STAR Washer Head HCR® Project Pax®	12
10223	5/16" x 3-1/2" RSS Structural Screw	500	3581820700900	1/4" x 3-1/2" PowerLags® T-STAR Washer Head HCR® Pail	500
12223	5/16" x 3-1/2" RSS Structural Screw	100	4581820700905	1/4" x 3-1/2" 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 5-1/8" RSS Structural Screw	300	3581820701270	1/4" x 5" PowerLags® T-STAR Washer Head HCR® Pail	500
12231	5/16" x 5-1/8" RSS Structural Screw	50	4581820701275	1/4" x 5" PowerLags® T-STAR Washer Head HCR® Contractor Pax®	500
14231	5/16" x 5-1/8" 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 3-1/8" 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 7-1/4" RSS Structural Screw	200	N/A	N/A	N/A
12285	3/8" x 7-1/4" 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 14-1/8" 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



## GRK to SPAX®

[illegible]

- ▲ 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>

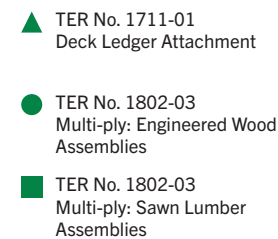
# Competitor Size Cross Reference

FastenMaster® to SPAX®



FM Part #	FM Description	FM PKG/CT	SPAX® Part #	SPAX® PowerLags® Description	SPAX® PKG/CT	Alternative SPAX® Part #
FMFL278-50	2-7/8" FlatLok 50 CT	50	N/A	N/A	N/A	4581820800765
FMFL278B-500	2-7/8" FlatLok 500 CT	500	N/A	N/A	N/A	3581820800760
FMFL312-50	3-1/2" FlatLok 50 CT	50	4581820800905	● 5/16" x 3-1/2" T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL312B-250	3-1/2" FlatLok 250 CT	250	3581820800900	● 5/16" x 3-1/2" 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	4-1/2" FlatLok 50 CT	50	4581820801155	■ 5/16" x 4-1/2" T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL412B-250	4-1/2" FlatLok 250 CT	250	3581820801150	■ 5/16" x 4-1/2" 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	6-3/4" FlatLok 50 CT	50	4581820801715	● 5/16" x 6-3/4" T-STAR Washer Head HCR® Contractor Pax®	50	
FMFL634B-200	6-3/4" FlatLok 200 CT	200	3581820801710	● 5/16" x 6-3/4" T-STAR Washer Head HCR® Pail	250	
FMLL350-12	3-5/8" LedgerLok 12 CT	12	N/A	N/A	N/A	45818208009043
FMLL358-50	3-5/8" LedgerLok 50 CT	50	N/A	N/A	N/A	4571820800905
FMLL358B-250	3-5/8" 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	3-5/8" LedgerLok Flat Head 12 CT	12	N/A	N/A	N/A	45818208009043
FMLLF358-50	3-5/8" LedgerLok Flat Head 50 CT	50	N/A	N/A	N/A	4581820800905
FMLLF358B-250	3-5/8" 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	2-1/2" TimberLok 12 CT	12	N/A	N/A	N/A	45818207006343
FMTLOK212-50	2-1/2" TimberLok 50 CT	50	N/A	N/A	N/A	4581820700635
FMTLOK212-500	2-1/2" 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 Head HCR® Project Pax®	12	
FMTLOK06-50	6" TimberLok 50 CT	50	4571820701525	1/4" x 6" Hex Head HCR® Contractor Pax®	50	
FMTLOK06-250	6" TimberLok 250 CT	250	3571820701520	1/4" x 6" Hex 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	1-5/8" HeadLok 500 CT	500	N/A	N/A	N/A	N/A
FMHLGM278-12	2-7/8" HeadLok 12 CT	12	N/A	N/A	N/A	45818207007643
FMHLGM278-50	2-7/8" HeadLok 50 CT	50	N/A	N/A	N/A	4581820700765
FMHLGM278-500	2-7/8" HeadLok 500 CT	500	N/A	N/A	N/A	3581820700760
FMHLGM334-500	3-3/4" HeadLok 500 CT	500	N/A	N/A	N/A	3581820700900
FMHLGM412-12	4-1/2" HeadLok 12 CT	12	45818207015543	1/4" x 4-1/2" T-STAR Washer Head HCR® Project Pax®	12	
FMHLGM412-50	4-1/2" HeadLok 50 CT	50	4581820701555	1/4" x 4-1/2" T-STAR Washer Head HCR® Contractor Pax®	50	
FMHLGM005-250	4-1/2" HeadLok 250 CT	250	3581820701550	1/4" x 4-1/2" T-STAR Washer Head HCR® Pail	500	
FMHLGM512-250	5-1/2" 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	6-1/2" 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	7-1/2" 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	8-1/2" 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	9-1/2" 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

## FastenMaster® to SPAX®



## 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 Fasteners

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/>

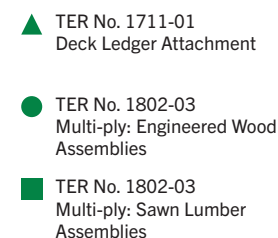
# Competitor Size Cross Reference

## Simpson Strong-Tie® to SPAX®



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	7-1/2" SDWS Timber Screw (Interior Grade)	250	N/A	N/A	N/A
SDWS19712-R50	7-1/2" 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

## Simpson Strong-Tie® to SPAX®



## SPAX® PowerLags® to Simpson Strong-Tie® Sizing

NOTE: Major diameter lengths in parentheses.

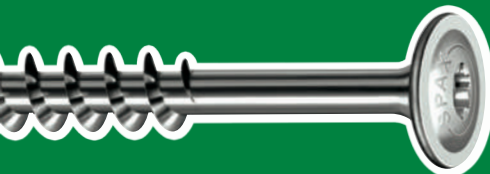
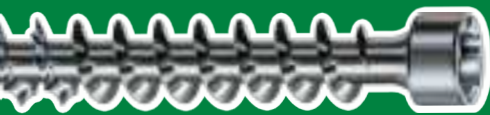
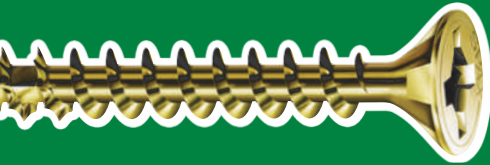
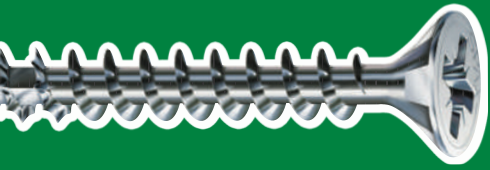
This is a size cross reference. Application cross reference must be confirmed by Manufacturer Technical Evaluation Report.

SPAX® ICC Report: <https://icc-es.org/wp-content/uploads/report-directory/ESR-1782.pdf>  
Simpson UES Report: [https://embed.widenetcdn.net/pdf/plus/ssstoolbox/96lrxjfxjn/IAPMO\\_UES\\_ER192.pdf?u=cjmvin](https://embed.widenetcdn.net/pdf/plus/ssstoolbox/96lrxjfxjn/IAPMO_UES_ER192.pdf?u=cjmvin)



# MATERIALS & COATINGS

Coatings are applied to “carbon steel” fasteners, heat treated to grade 5 durability. In addition, SPAX® offers fasteners in 304 stainless steel.



INTERIOR  
(Low Corrosion Resistance)

EXTERIOR — TREATED LUMBER  
(Medium Corrosion Resistance)

EXTERIOR — TREATED LUMBER  
(High 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 (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).

## 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 green, white, and yellow.

## 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).

## STAINLESS STEEL

“304 stainless steel” is code compliant for use in ground contact pressure treated and fire-retardant-treated<sup>1</sup> 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>

# MERCHANDISING SETS



## SPAX® PowerLags® 2 ft. Merchandiser Display



This 2 foot SPAX® rack display is designed specific for lumberyards who mainly move exterior construction fasteners.

Products included:

- Exterior use PowerLags®
- Multiple package types
- Ledger attachment fasteners
- Multi-ply (Sawn Lumber & Engineered Wood Assemblies) fasteners
- Driver Bits

Full Set Part Number: V2FTLBMLAG-FULL

2 ft. Rack Part Number: V2FTDISPLAYPS-PLAG

## PRODUCT MIX

RACK SIZE: 25" x 19" x 42 1/2"

HEADER SIZE: 12" x 23"

	ID	PART #	PRODUCT DESCRIPTION
SHELF 1	1	5000002016309	SPAX® T30 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)
	2	4581820701005	1/4" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	3	4581820701275	1/4" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	4	4581820701525	1/4" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	5	5000002016409	SPAX® T40 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)
	6	4581820800765	5/16" x 3" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	7	4581820800905	5/16" x 3-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
SHELF 2	8	4581820801005	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	9	4581820801155	5/16" x 4-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	10	4581820801275	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	11	4581820801525	5/16" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	12	4581820802035	5/16" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	13	4581820802545	5/16" x 10" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
SHELF 3	14	4581820803045	5/16" x 12" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	15	45818208010043	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
	16	45818208012743	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
	17	45818208015243	5/16" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
	18	45818208020343	5/16" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
	19	45818208025443	5/16" x 10" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
SHELF 4	20	3581820801000	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Bulk Pail - 250CT
	21	3581820801710	5/16" x 6-3/4" SPAX® PowerLags® T-STAR Washer Head HCR® Bulk Pail - 250CT

Scan the QR code to find current stocking locations for SPAX



Dealers & Contractors interested in buying or stocking SPAX contact your local SPAX Rep.



# MERCHANDISING SETS



## SPAX® Combo 2 ft. Merchandiser Display



This 2 foot SPAX® rack display is designed for lumberyards promoting both multi-material and structural fasteners.

Products included:

- Multi-material Flat head (exterior)
- Structural fasteners (exterior & treated lumber)
  - Ledger attachment
  - Multi-ply (Sawn Lumber & Engineered Wood Assemblies)
- Structural truss-to-wall plate attachment
- Driver bits

Full Set Part Number: V2FTLBMCOMBO-FULL

2 ft. Rack Part Number: V2FTDISPLAYPS-MULT

## PRODUCT MIX

RACK SIZE: 25" x 19" x 42 1/2"

HEADER SIZE: 12" x 23"

	ID	PART #	PRODUCT DESCRIPTION
SHELF 1	1	4191670450604	#9 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 109CT
	2	4191670450804	#9 x 3-1/4" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 83CT
	3	4191670500754	#10 x 3" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 67CT
	4	4191670500904	#10 x 3-1/2" SPAX T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 59CT
	5	5000009285209	SPAX® T-20+ 2" Bit Double Blister Cut Case
	6	5000002016309	SPAX® T30 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)
	7	5000009285309	SPAX® T30 2" Bit Double Blister Cut Case
SHELF 2	8	4581820701005	1/4" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	9	4581820701275	1/4" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	10	4581820701525	1/4" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	11	4581820800765	5/16" x 3" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	12	4581820800905	5/16" x 3-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	13	4581820801005	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
SHELF 3	14	45818208010043	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
	15	4581820801155	5/16" x 4-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	16	4581820801275	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	17	45818208012743	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
	18	4581820801525	5/16" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	19	45818208015243	5/16" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
SHELF 4	20	4581820802035	5/16" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT
	21	45818208020343	5/16" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT
	22	5000002016409	SPAX® T40 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)
	23	42110106016045	#14 x 6-1/4" SPAX® T-STAR+ Cylindric Head WIROX® Truss Screw Contractor Pax® - 50CT
	24	3581820801710	5/16" x 6-3/4" SPAX® PowerLags® T-STAR Washer Head HCR® Bulk Pail - 250CT

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# MERCHANDISING SETS



## SPAX® 4 ft. Gondola Merchandiser Display



This 4 foot SPAX® gondola set is designed specific for lumberyards promoting a wide range of structural and finishing/remodeling fasteners.

### Products included:

- Finishing trim fasteners
- Multi-material fasteners (interior & exterior)
  - Flat head & Wafer head
- Structural fasteners (exterior & treated lumber)
  - Ledger attachment
  - Multi-ply (Sawn Lumber & Engineered Wood Assemblies)
- Driver bits

Full Set Part Number: V4FTLBMGONDOL-FULL

\* Gondola not included.

## PRODUCT MIX

HEADER SIZE: 14" x 48"

SHELF 1	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 48" x 7-7/8" x 6-5/8"
	1	42318304005068	#8 x 2" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread White HCR® - 100CT	
	2	42318304006068	#8 x 2-1/2" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread White HCR® - 100CT	
	3	42318704003168	#8 x 3-1/8" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	4	42318704003268	#8 x 1-1/4" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	5	42318704004068	#8 x 1-1/2" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	6	42318704005068	#8 x 2" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	7	42318704006068	#8 x 2-1/2" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	8	42318704510068	#9 x 4" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 50CT	
	9	42318704512768	#9 x 5" SPAX® PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 50CT	
	10	42418304005068	#8 x 2" SPAX® PowerTrim® T-STAR+ Trim Head Double Thread White HCR® - 100CT	
	11	42418304006068	#8 x 2-1/2" SPAX® PowerTrim® T-STAR+ Trim Head Double Thread White HCR® - 100CT	
	12	42418704003168	#8 x 3-1/8" SPAX® PowerTrim® T-STAR+ Trim Head Double Thread Yellow HCR® - 100CT	
	13	42418704005068	#8 x 2" SPAX® PowerTrim® T-STAR+ Trim Head Double Thread Yellow HCR® - 100CT	
	14	42418704006068	#8 x 2-1/2" SPAX® PowerTrim® T-STAR+ Trim Head Double Thread Yellow HCR® - 100CT	

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# MERCHANDISING SETS



## SPAX® 4 ft. Gondola Merchandiser Display

SHELF 2	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 48" x 11-3/4" x 6-3/8"
	15	5000009285209	SPAX® T-20+ 2" Bit Double Blister Cut Case	
	16	4281020400324	#8 x 1-1/4" SPAX® T-STAR+ Wafer Head Partial Thread Yellow Zinc 1lb. Box - 195CT	
	17	4281020400404	#8 x 1-1/2" SPAX® T-STAR+ Wafer Head Partial Thread Yellow Zinc 1lb. Box - 175CT	
	18	4281020400504	#8 x 2" SPAX® T-STAR+ Wafer Head Partial Thread Yellow Zinc 1lb. Box - 140CT	
	19	4281020400604	#8 x 2-1/2" SPAX® T-STAR+ Wafer Head Partial Thread Yellow Zinc 1lb. Box - 120CT	
	20	4281020500604	#10 x 2-1/2" SPAX® T-STAR+ Wafer Head Partial Thread Yellow Zinc 1lb. Box - 75CT	
	21	4281020500754	#10 x 3" SPAX® T-STAR+ Wafer Head Partial Thread Yellow Zinc 1lb. Box - 65CT	
	22	4281670400324	#8 x 1-1/4" SPAX® T-STAR+ Wafer Head Partial Thread HCR-X™ 1lb. Box - 195CT	
	23	4281670400404	#8 x 1-1/2" SPAX® T-STAR+ Wafer Head Partial Thread HCR-X™ 1lb. Box - 165CT	
	24	4281670400504	#8 x 2" SPAX® T-STAR+ Wafer Head Partial Thread HCR-X™ 1lb. Box - 140CT	
	25	4281670500604	#10 x 2-1/2" SPAX® T-STAR+ Wafer Head Partial Thread HCR-X™ 1lb. Box - 77CT	
	26	4281670500754	#10 x 3" SPAX® T-STAR+ Wafer Head Partial Thread HCR-X™ 1lb. Box - 63CT	
	27	4191020400324	#8 x 1-1/4" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 240CT	
	28	4191020400404	#8 x 1-1/2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 197CT	
SHELF 3	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 48" x 12-7/8" x 6"
	29	4191020400504	#8 x 2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 161CT	
	30	4191020400604	#8 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 133CT	
	31	4191020400607	#8 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 5lb. Box - 618CT	
	32	4191020450604	#9 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 116CT	
	33	4191020450804	#9 x 3-1/4" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 89CT	
	34	4191020500404	#10 x 1-1/2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 133CT	
	35	4191020500504	#10 x 2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 107CT	
	36	4191020500604	#10 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 87CT	
	37	4191020500754	#10 x 3" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 1lb. Box - 72CT	
	38	4191020500757	#10 x 3" SPAX® T-STAR+ Flat Head Partial Thread Yellow Zinc 5lb. Box - 322CT	
	39	5000002016309	SPAX® T30 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)	
	40	4191670400324	#8 x 1-1/4" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 230CT	
	41	4191670400404	#8 x 1-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 195CT	
SHELF 4	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 48" x 12-7/8" x 6"
	42	4191670400504	#8 x 2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 154CT	
	43	4191670400604	#8 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 124CT	
	44	4191670450604	#9 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 109CT	
	45	4191670450804	#9 x 3-1/4" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 83CT	
	46	4191670500404	#10 x 1-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 125CT	
	47	4191670500504	#10 x 2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 99CT	
	48	4191670500604	#10 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 81CT	
	49	4191670500607	#10 x 2-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 5lb. Box - 405CT	
	50	4191670500754	#10 x 3" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 67CT	
	51	4191670500757	#10 x 3" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 5lb. Box - 335CT	
	52	4191670500904	#10 x 3-1/2" SPAX® T-STAR+ Flat Head Partial Thread HCR-X™ 1lb. Box - 59CT	
	53	5000002016409	SPAX® T40 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)	
	54	5000002016509	SPAX® T50 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)	

Scan the QR code to find current stocking locations for SPAX



Dealers & Contractors interested in buying or stocking SPAX contact your local SPAX Rep.



# MERCHANDISING SETS



## SPAX® 4 ft. Gondola Merchandiser Display

SHELF 5	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 48" x 13-1/2" x 3-1/2"
	55	4581820700635	1/4" x 2-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	56	4581820700765	1/4" x 3" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	57	4581820700905	1/4" x 3-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	58	4581820701275	1/4" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	59	4581820701525	1/4" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	60	4581820800765	5/16" x 3" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	61	4581820800905	5/16" x 3-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	62	4581820801005	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	63	4581820801155	5/16" x 4-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	64	4581820801275	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	65	4581820801525	5/16" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	66	4581820802035	5/16" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	67	4581820802545	5/16" x 10" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	68	4581820803045	5/16" x 12" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
SHELF 6	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 48" x 10-5/8" x 8-3/8"
	69	45818207006343	1/4" x 2-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	70	45818207007643	1/4" x 3" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	71	45818207009043	1/4" x 3-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	72	45818207010043	1/4" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	73	45818207015543	1/4" x 4-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	74	45818207012743	1/4" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	75	45818207015243	1/4" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	76	45818208007643	5/16" x 3" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	77	45818208009043	5/16" x 3-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	78	45818208010043	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	79	45818208011543	5/16" x 4-1/2" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
SHELF 7	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 48" x 13" x 12-5/8"
	80	45818208012743	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	81	45818208015243	5/16" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	82	45818208020343	5/16" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	83	45818208025443	5/16" x 10" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	84	4581821001279	3/8" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® (Individually tagged) - 80CT	
	85	4581821001529	3/8" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® (Individually tagged) - 60CT	
	86	4581821002039	3/8" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® (Individually tagged) - 50CT	
	87	4581821002549	3/8" x 10" SPAX® PowerLags® T-STAR Washer Head HCR® (Individually tagged) - 40CT	
	88	4571821201279	1/2" x 5" SPAX® PowerLags® Hex Head HCR® (Individually tagged) - 60CT	
	89	4571821202039	1/2" x 8" SPAX® PowerLags® Hex Head HCR® (Individually tagged) - 40CT	
	90	4571821202549	1/2" x 10" SPAX® PowerLags® Hex Head HCR® (Individually tagged) - 30CT	

Scan the QR code to find current stocking locations for SPAX



Dealers & Contractors interested in buying or stocking SPAX contact your local SPAX Rep.



# MERCHANDISING SETS



## PowerLags® 2 ft. Merchandiser Signage

## Combo 2 ft. Merchandiser Signage



### SPAX® PowerLags® 2 ft. Merchandiser Header

Part Number: V2FTLAGHEADER-LBM

Size: 12" x 23"

### SPAX® Combo 2 ft. Merchandiser Header

Part Number: V2FTCOMBOHDR-LBM

Size: 12" x 23"



### SPAX® PowerLags® 2 ft. Merchandiser Side Panels

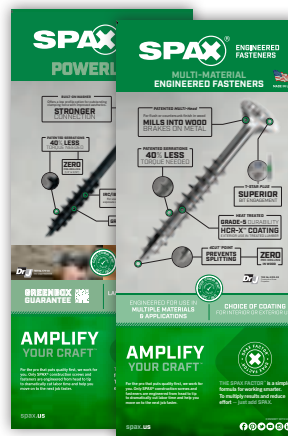
Part Number: V2FTLAGSPANEL-LBM

Size: 38" x 16 3/4"



### SPAX® PowerLags® Channel Cards

Part Number: V2FTLBMCHCRD-LAGS



### SPAX® Combo 2 ft. Merchandiser Side Panels

PowerLags® Panel Part Number: V2FTLAGSPANEL-LBM

Multi-Material Panel Part Number: V2FTMPSIDEPNL-LBM

Size: 38" x 16 3/4"



### SPAX® Combo Channel Cards

Part Number: V2FTLBMCHCRD-COMBO



### 2 ft. Display Plastic Channels

Part Number: V2FTCHCARDHOLDER



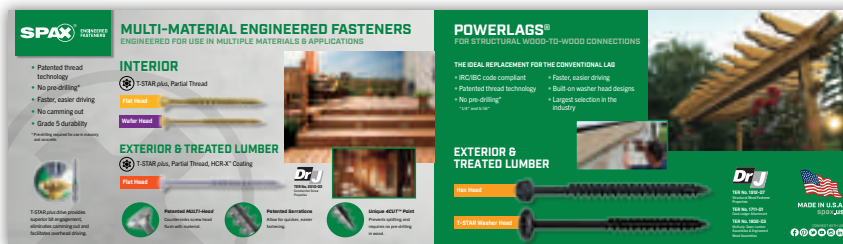
### ALSO AVAILABLE:

### SPAX® Multi-Material 2 ft. Merchandiser Header

Part Number: V2FTMULTHEADER-LBM

Size: 12" x 23"

## 4 ft. Gondola Merchandiser Signage



### SPAX® Gondola 4 ft. Merchandiser Header

Part Number: V4FTHEADER-LBM

Size: 14" x 48"



### SPAX® Gondola Channel Cards

Part Number: V4FTCHCARD-GONDOLA



### Gondola Plastic Channels

Part Number: V4FTCHCARDHOLDER

# MERCHANDISING SETS



## SPAX® 3ft. Deck Solutions Center Display



This 2ft. x 3ft. SPAX® rack display is designed specific for lumberyards interested in promoting/selling Deck Solutions products.

Products included:

- Composite deck screws
- Finishing trim screws
- Multi-material fasteners (exterior)
- Structural fasteners (exterior & treated lumber)
  - Ledger attachment
  - Multi-ply (Sawn Lumber & Engineered Wood Assemblies)
- Driver bits

Full Set Part Number: V3FTLBMDECK-FULL

## PRODUCT MIX

HEADER SIZE: 12" x 38"

	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 8.6" x 36" x 15"
SHELF 1	1	5000009185209	SPAX® T-20+ 1" Bit Cut Case	
	2	5000009285209	SPAX® T-20+ 2" Bit Double Blister Cut Case	
	3	5100007193091	SPAX® 4-sided Deck Board Spacers - 3CT	
	4	42318704003268	SPAX® #8 x 1-1/4" PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	5	42318704004068	SPAX® #8 x 1-1/2" PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	6	42318704005068	SPAX® #8 x 2" PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	7	42318304005068	SPAX® #8 x 2" PowerTrim® T-STAR+ Trim Head Partial Thread White HCR® - 100CT	
	8	42318704006068	SPAX® #8 x 2-1/2" PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	9	42318304006068	SPAX® #8 x 2-1/2" PowerTrim® T-STAR+ Trim Head Partial Thread White HCR® - 100CT	
	10	42318704003168	SPAX® #8 x 3-1/8" PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 100CT	
	11	42318704510068	SPAX® #9 x 4" PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 50CT	
	12	42318704512768	SPAX® #9 x 5" PowerTrim® T-STAR+ Trim Head Partial Thread Yellow HCR® - 50CT	
SHELF 2	13	4191670400604	SPAX® #8 x 2-1/2" T-STAR+ Flat Head HCR-X™ 1lb. Box - 230CT	PRODUCT SIZE: 7.13" x 36" x 15"
	14	4191670450604	SPAX® #9 x 2-1/2" T-STAR+ Flat Head HCR-X™ 1lb. Box - 109CT	
	15	4191670450804	SPAX® #9 x 3-1/4" T-STAR+ Flat Head HCR-X™ 1lb. Box - 83CT	
	16	4191670500754	SPAX® #10 x 3" T-STAR+ Flat Head HCR-X™ 1lb. Box - 67CT	
	17	4191670500758	SPAX® #10 x 3" T-STAR+ Flat Head HCR-X™ Mini Pail - 225CT	
	18	42418704005068	SPAX® #8 x 2" PowerTrim® T-STAR+ Trim Head Double Thread Yellow HCR® - 100CT	
	19	42418704006068	SPAX® #8 x 2-1/2" PowerTrim® T-STAR+ Trim Head Double Thread Yellow HCR® - 100CT	
	20	42418704003168	SPAX® #8 x 3-1/8" PowerTrim® T-STAR+ Trim Head Double Thread Yellow HCR® - 100CT	
	21	42418304005068	SPAX® #8 x 2" PowerTrim® T-STAR+ Trim Head Double Thread White HCR® - 100CT	
	22	42418304006068	SPAX® #8 x 2-1/2" PowerTrim® T-STAR+ Trim Head Double Thread White HCR® - 100CT	

Scan the QR code to find current stocking locations for SPAX



Dealers & Contractors interested in buying or stocking SPAX contact your local SPAX Rep.





# MERCHANDISING SETS



## SPAX® 3ft. Deck Solutions Center Display

SHELF 3	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 9.75" x 36" x 15"
	23	45718208010043	5/16" x 4" SPAX® PowerLags® Hex Head HCR® Project Pax® - 12CT	
	24	4571820801005	5/16" x 4" SPAX® PowerLags® Hex Head HCR® Contractor Pax® - 50CT	
	25	45718208012743	5/16" x 5" SPAX® PowerLags® Hex Head HCR® Project Pax® - 12CT	
	26	4571820801275	5/16" x 5" SPAX® PowerLags® Hex Head HCR® Contractor Pax® - 50CT	
	27	4121530500692	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Dark Brown Composite Deck Screws Retail Pax® - 75CT	
	28	41215305006943	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Dark Brown Composite Deck Screws Project Pax® - 350CT	
	28	4121560500692	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Dark Gray Composite Deck Screws Retail Pax® - 75CT	
SHELF 4	30	41215605006943	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Dark Gray Composite Deck Screws Project Pax® - 350CT	
	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 9.13" x 36" x 15"
	31	45818208010043	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	32	4581820801005	5/16" x 4" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	33	45818208012743	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Project Pax® - 12CT	
	34	4581820801275	5/16" x 5" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	35	5000002016409	SPAX® T40 Bit Cut Case (Includes a quantity of 10 individually blister packed 1" bits)	
	36	4121510500692	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Sand Composite Deck Screws Retail Pax® - 75CT	
SHELF 3	37	41215105006943	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Sand Composite Deck Screws Project Pax® - 350CT	
	38	4121540500692	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Pebble Composite Deck Screws Retail Pax® - 75CT	
	39	41215405006943	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Pebble Composite Deck Screws Project Pax® - 350CT	
	ID	PART #	PRODUCT DESCRIPTION	PRODUCT SIZE: 8.5" x 36" x 15"
	40	4581820801525	5/16" x 6" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	41	4581820802035	5/16" x 8" SPAX® PowerLags® T-STAR Washer Head HCR® Contractor Pax® - 50CT	
	42	4121500500692	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Java Composite Deck Screws Retail Pax® - 75CT	
	43	41215005006943	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Java Composite Deck Screws Project Pax® - 350CT	
SHELF 3	44	4121550500692	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Slate Composite Deck Screws Retail Pax® - 75CT	
	45	41215505006943	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Slate Composite Deck Screws Project Pax® - 350CT	
	46	4121520500692	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Gray Composite Deck Screws Retail Pax® - 75CT	
	47	41215205006943	SPAX® #10 x 2-3/4" T-STAR Cylindric Head Gray Composite Deck Screws Project Pax® - 350CT	



### SPAX® 3 ft. Deck Solutions Center Header

Part Number: V3FTDSCHEADER-LBM

Size: 12" x 38"



### SPAX® Deck Solutions Center Channel Cards

Part Number: V3FTLBMCHCRD-DSC



### SPAX® 3 ft. Deck Solutions Center Side Panel

Part Number: V3FTDSCPANEL-LBM

Size: 45.813" x 16.75"

Scan the QR code to find current stocking locations for SPAX



Dealers & Contractors interested in buying or stocking SPAX contact your local SPAX Rep.





# MERCHANDISING SETS



## SPAX® Deck Tape 1/4 Pallet Display



Our new 1/4 pallet off shelf display is intended for retailers who plan to provide joist and beam tape as an option to buy along with their treated lumber purchase.

PART #	PRODUCT DESCRIPTION	QUANTITY
5100007193071	SPAX® Joist Tape	72
5100007193081	SPAX® Beam Tape	18

## SPAX® Deck Board Spacer Gravity Feeder



Our gravity feed merchandizer is designed for optimal placement of this Deck Solutions accessory product for our decking contractors.

Full Set Part Number: 5100007193091-GF

PART #	PRODUCT DESCRIPTION	QUANTITY
5100007193091	SPAX® 4-sided Deck Board Spacers - 3CT	12

Scan the QR code to find current stocking locations for SPAX



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# IN-STORE SIGNAGE & DISPLAYS



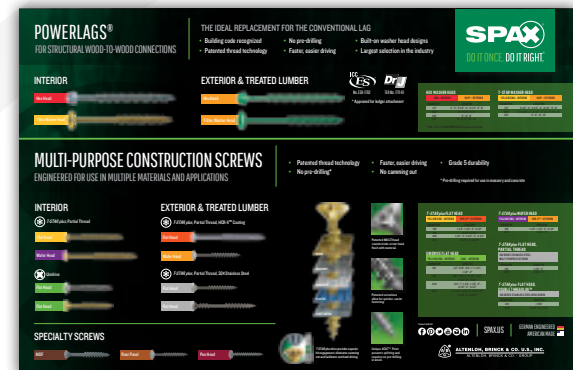
**SPAX® Banner (Interior)**  
Size: 24" x 48"



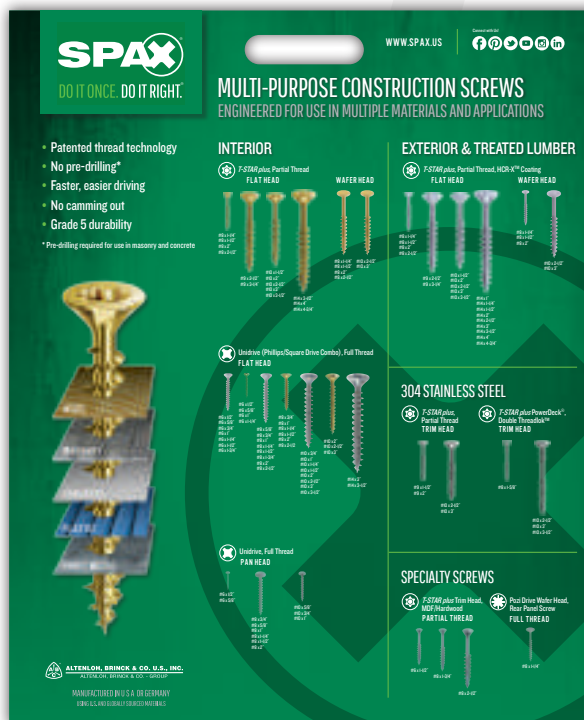
**SPAX® Merchandise Header with Actual Fasteners Attached**  
Size: 11 7/8" x 23"



**SPAX® Banner (Exterior)**  
Size: 24" x 48"



**SPAX® Countermat for Pro-Desk**  
Size: 11" x 17"



**SPAX® Product Boards: PowerLags® & Multi-Material**  
Size: 28" x 23"

www.spax.us



**SPAX® Specification Binder**

- Includes:
- Catalog / Product Book
  - Technical Documents
  - Drawings
  - Policies



**SPAX® Sample Packs**



**SPAX® Window Decal**  
Size: 4" x 6"

**Notes:**



## INNOVATIVE FASTENING SOLUTIONS

TRUFast® is a well-known and respected name in the Commercial Roofing and SIP industries. Trufast products are manufactured by the ALTENLOH, BRINCK & CO Group. (ABC US) located in Northwest (Bryan) Ohio. Trufast products are sold throughout North America and parts of Western Europe by roofing and building materials distributors under the TRUFast® brand, as well as under the private labels of many leading brands in the commercial roofing and construction industries.

[www.trufast.com](http://www.trufast.com)

## PRODUCTS

- Adhesives & Sealants
- Steel & Wood Deck Roofing Fasteners
- Structural Concrete Roofing Fasteners
- Pre-Assembled Fasteners & Tools
- Gypsum, Cementitious Wood Fiber & Lightweight Insulation Concrete Roofing Fasteners
- Base Sheet Fasteners
- SIP & Nail Base Fasteners
- Membrane & Insulation Plates
- Termination, Batten & Gravel Stop Bars
- Continuous Rigid Insulation, Building Wrap, EIFS & Stucco Fasteners & Tools



## TRUFast® WALLS

### TRUFast® Walls products



GRIP-DECK® TubeSeal



THERMAL-GRIP® ci PRONG WASHER



GRIP-LOK® MW PLATE

## BUILDING ENVELOPE FASTENING SOLUTIONS

TRUFast® Walls has partnered with leading insulation, building wrap, and air/moisture barrier manufacturers and has developed fasteners and tools to rapidly install the material. TRUFast® Walls Products are designed with energy efficiency and labor savings in mind, taking traditional installation methods and improving for better building performance.

[www.trufastwalls.com](http://www.trufastwalls.com)



Deck Spacers

Deck Joist & Beam Tape

Composite Deck Screws

We have everything you need to build the strongest decks in the neighborhood. Scan the QR code to find out more.



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**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-IS5

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.

S-2103 Rev 8/22