



T-STAR *plus* Wafer Head Yellow Zinc

Cabinet Screws



INTERIOR

DESCRIPTION

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

MATERIALS & COATING

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



Low Profile Wafer Head

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



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.



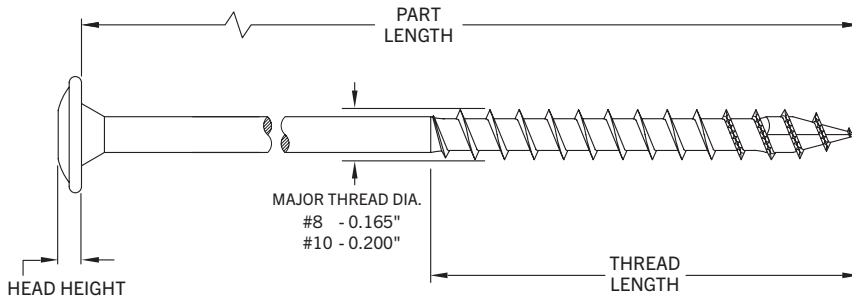
TYPICAL INTERIOR APPLICATIONS

- 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
					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
					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
					1500	Bulk Pail	N/A	3281020500600
#10 x 3"	N/A	1.625"	0.470" 0.085"	T20+	65	1 lb. Box	5	4281020500754
					185	3 lb. Box	3	42810205007545
					1000	Bulk Pail	N/A	3281020500750

NOTE: Only sold in master cartons.



1 and 3 lb. Boxes



Bulk Pail



T-STAR plus Bit



T-STAR plus Wafer Head Yellow Zinc

Cabinet Screws



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) ^{1,2,3,4}					
	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) ^{1,2}											
	PLYWOOD 15/32" (0.39)		PLYWOOD 19/32" (0.39)		PLYWOOD 23/32" (0.50)		OSB 15/32" (0.50)		OSB 19/32" (0.50)		OSB 23/32" (0.50)	
	WITHDRAWAL	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

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

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

³ Head pull-through values for #8 diameter and larger in Southern Pine, Douglas-Fir, Hem-Fir and Spruce-Pine-Fir are minimum 1.5" side member thickness.

⁴ For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

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

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

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



T-STAR plus Wafer Head Yellow Zinc

Cabinet Screws



INTERIOR

DIAMETER	REFERENCE LATERAL SHEAR VALUE ^{4,5,6} , Z (lbf)				
	MINIMUM MAIN MEMBER PENETRATION ¹ (in)	MINIMUM SIDE MEMBER THICKNESS (in)	WOOD SPECIES (SPECIFIC GRAVITY ^{2,3})		
			SP (0.55)	DF-L (0.50)	SPF/HF (0.42)
#8 x 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

¹ Penetration depth includes the length of tapered tip.

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

³ For wood species with an assigned specific gravity between 0.42 and 0.50, use the tabulated values for specific gravity of 0.42. For wood species with an assigned specific gravity between 0.50 and 0.55, use the tabulated values for specific gravity of 0.50. For wood species with an assigned specific gravity greater than or equal to 0.55, use the tabulated values for specific gravity of 0.55.

⁴ The fastener orientation shall be perpendicular to the grain, and the underside of the fastener head shall be installed flush with the surface of the side member.

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

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

DIAMETER	REFERENCE LATERAL SHEAR VALUE, Z (lbf)			
	MINIMUM MAIN MEMBER PENETRATION ¹ (in)	MINIMUM SIDE MEMBER THICKNESS (in)	REFERENCE LATERAL SHEAR VALUE ^{1,3,4} , Z (lbf)	
			OSB ⁵ (0.50)	PLYWOOD ⁵ (0.39)
#8 x 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

¹ Reference lateral design values apply to two-member single shear connections where the side member is OSB or plywood, the main member is SPF (SG = 0.42), and the fastener is installed in the face of the member and oriented perpendicular to the grain. The underside of the fastener head shall be installed flush with the surface of the side member.

² Penetration depth includes the length of the tapered tip.

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

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

⁵ OSB shall comply with *DOC PS 2* and have a minimum specific gravity of 0.50. Plywood shall comply with *DOC PS 1* and have a minimum specific gravity of 0.39.