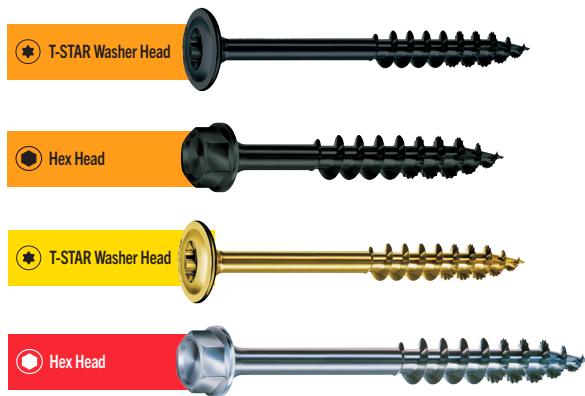


JOB NAME:	
CONTRACTOR:	DATE:
NOTES:	



POWERLAGS® FOR WOOD-TO-WOOD CONNECTIONS



SPAX® PowerLags® series structural wood fasteners are threaded fasteners manufactured using a standard cold-forming process and subsequently heat-treated and coated. Fasteners with HCR® coating are intended for wood-to-wood connections in exterior structural applications including attaching treated lumber components. These code-recognized structural wood-to-wood screws are available in 1/4", 5/16", 3/8", and 1/2" diameters.

FEATURES:

- No pre-drilling required (1/4" and 5/16")
- Grade 5 durability
- Patented thread serrations require up to 40% less driving torque to increase installation speed
- 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 HEAD OPTIONS:

- Hex head style
- T-STAR head style

COATING OPTIONS:

- Zinc and yellow zinc coating options for interior applications
- HCR® (High Corrosion Resistance) coating for exterior use, including treated lumber (equivalent to the protection provided hot-dipped galvanized coatings meeting ASTM A153)

CODE / TECHNICAL REPORTS:

- IRC/IBC Code Compliant DrJ TER No. 1912-07 Properties Report
- DrJ Technical Evaluation Reports TER No. 1711-01; Deck Ledger Attachment
- DrJ Technical Evaluation Reports TER No. 1802-03; Multi-Ply; Sawn Lumber Assemblies and Engineered Wood - LVL, PSL, LSL)
- Florida Product Approved #FL40711

INSTALLATION NOTES:

- No lead hole is required for 1/4" and 5/16" PowerLags® when used in wood species prescribed in DrJ TER No. 1912-07
- Lead hole of 11/64" (0.172") diameter is required for 3/8" PowerLags® and 13/64" (0.203") diameter lead hole is required for 1/2" PowerLags®

ORIGINS:

- Manufactured in Bryan, Ohio
- Raw material for PowerLags is from USA or Canada
- Certs available



MATERIALS & COATINGS:

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).

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).

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>



CHECK ALL THAT APPLY FOR SUBMITTAL

HEAD TYPE:

- ☐ Washer Head
- ☐ Hex Head

SIZE:

- ☐ 1/4"
- ☐ 5/16"
- ☐ 3/8"
- ☐ 1/2"

COATING TYPE:

- ☐ HCR® (Exterior)
- ☐ HCR-X™ (Exterior)
- ☐ Zinc (Interior)
- ☐ Yellow Zinc (Interior)

LENGTH:

- ☐ 2-1/2"
- ☐ 3"
- ☐ 3-1/2"
- ☐ 4"
- ☐ 4-1/2"
- ☐ 5"

- ☐ 5-1/2"
- ☐ 6"
- ☐ 6-1/2"
- ☐ 7"
- ☐ 7-1/2"
- ☐ 8"

- ☐ 8-1/2"
- ☐ 9"
- ☐ 9-1/2"
- ☐ 10"
- ☐ 11"
- ☐ 12"

PRODUCT SUBMITTAL



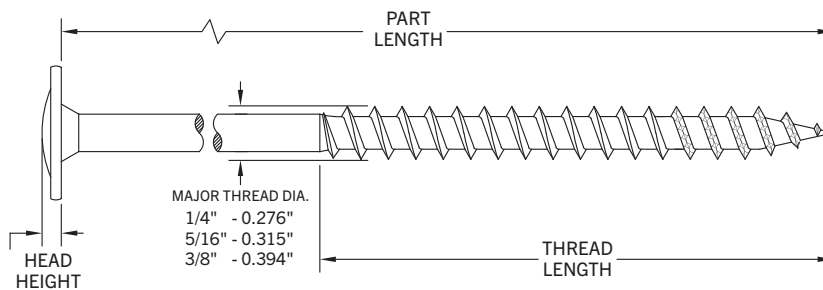
T-STAR WASHER HEAD HCR®



T-STAR WASHER HEAD HCR®

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

ledger attachment and multi-ply beam applications. Cold-rolled “carbon steel” wire heat treated to grade 5 durability and plated with an HCR finish to prevent red rust. “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).



PRODUCT SELECTION



▲ 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

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

* Bit not included.



PRODUCT SUBMITTAL



T-STAR WASHER HEAD HCR®

PRODUCT SELECTION



▲ 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

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

* Bit not included.



PRODUCT SUBMITTAL



T-STAR WASHER HEAD HCR®

PRODUCT SELECTION



▲ 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

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



PRODUCT SUBMITTAL



T-STAR WASHER HEAD HCR®

FASTENER LENGTHS



▲ 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

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 _H), LATERAL SHEAR PARALLEL TO GRAIN (Z), AND LATERAL SHEAR PERPENDICULAR TO GRAIN (Z _⊥) VALUES ^{1,2,3,4,5,6,7}											
		SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
		(W)	(W _H)	Z	Z _⊥	(W)	(W _H)	Z	Z _⊥	(W)	(W _H)	Z	Z _⊥
		(lbs./inch)	(lbs.)	(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

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

² "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.

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

⁴ Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.

⁵ Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.

⁶ Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.

⁷ Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.



PRODUCT SUBMITTAL



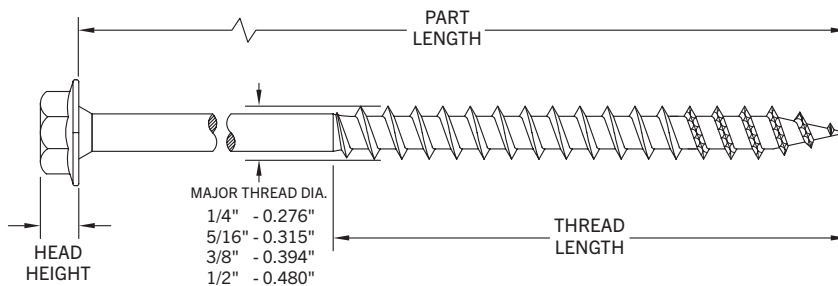
HEX HEAD HCR®



HEX HEAD HCR®

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. Cold-rolled “carbon steel” wire heat treated to grade 5 durability and plated with an HCR finish to prevent red rust. “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).



PRODUCT SELECTION



TER No. 1711-01
Deck Ledger Attachment

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
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

* Bit not included.



PRODUCT SUBMITTAL



HEX HEAD HCR®

PRODUCT SELECTION



TER No. 1711-01
Deck Ledger Attachment

PART LENGTH	THREAD LENGTH	HEAD DIA. HEAD HT.	DRIVE/BIT SIZE	APPROX. QTY.	PKG. TYPE	MASTER QTY.	PART NO.
1/4" x 6"	2.375"	0.545" 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
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.



PRODUCT SUBMITTAL



HEX HEAD HCR®

FASTENER LENGTHS



TER No. 1711-01
Deck Ledger Attachment

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

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 _⊥) VALUES ^{1,2,3,4,5,6,7}											
		SOUTHERN PINE (G=0.55)				DOUGLAS-FIR (G=0.50)				HEM FIR & SPRUCE-PINE-FIR (G=0.42)			
		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR		WITHDRAWAL	HEAD PULL-THROUGH	LATERAL SHEAR	
		(W)	(W _H)	Z	Z _⊥	(W)	(W _H)	Z	Z _⊥	(W)	(W _H)	Z	Z _⊥
		(lbs./inch)	(lbs.)	(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

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

² "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.

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

⁴ Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.

⁵ Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.

⁶ Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.

⁷ Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.



PRODUCT SUBMITTAL



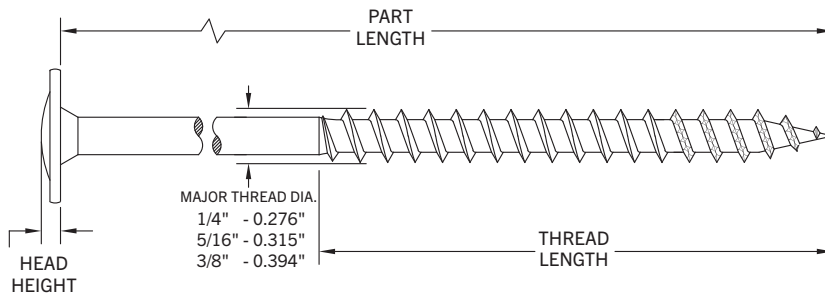
T-STAR WASHER HEAD YELLOW ZINC



T-STAR WASHER HEAD YELLOW ZINC

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 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. 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. AWPAC UC1-UC2).



PRODUCT SELECTION



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

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

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

* Bit not included.



PRODUCT SUBMITTAL



T-STAR WASHER HEAD YELLOW ZINC

PRODUCT SELECTION



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

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

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

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



PRODUCT SUBMITTAL



T-STAR WASHER HEAD YELLOW ZINC

PRODUCT SELECTION



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

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

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"	0.970" 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.

FASTENER LENGTHS



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

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

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



PRODUCT SUBMITTAL



T-STAR WASHER HEAD YELLOW ZINC

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

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

² "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.

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

⁴ Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.

⁵ Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.

⁶ Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.

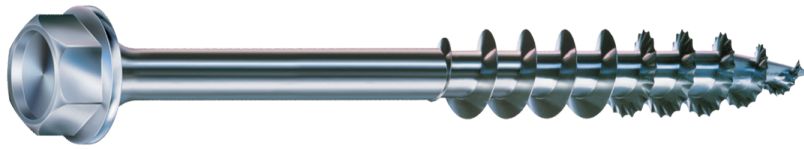
⁷ Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.



PRODUCT SUBMITTAL



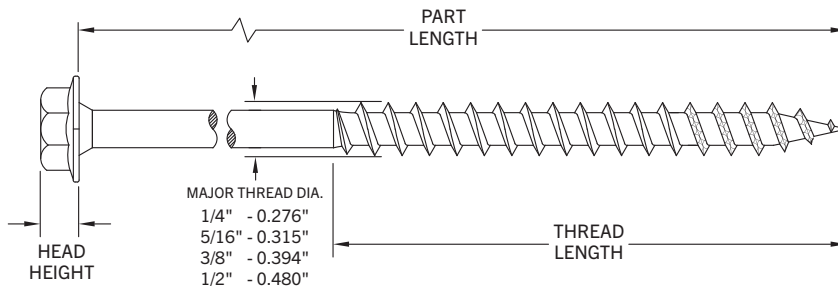
HEX HEAD ZINC



HEX HEAD ZINC

SPAX® Hex Head construction fasteners with zinc coating are intended for wood-to-wood connection 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.

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).



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

* Bit not included.

PRODUCT SUBMITTAL



HEX HEAD ZINC

PRODUCT SELECTION

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



PRODUCT SUBMITTAL



HEX HEAD ZINC

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

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

² "Withdrawal" design values are to be multiplied by the length of the thread penetration into the side grain of the main member. Length includes tip.

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

⁴ Tabulated "Withdrawal" and "Head Pull-Through" design values are for the wood species with the listed assigned specific gravities. Where the wood species assigned specific gravity is not listed, use the next lower assigned specific gravity values.

⁵ Tabulated "Lateral Shear" design values are for the wood species with the listed assigned specific gravities applied to both the main and side members. Where the members are different assigned specific gravities, use the lower of the two.

⁶ Tabulated "Lateral Shear" design values require fasteners must be oriented perpendicular to the side grain, and the underside of the fastener head be installed flush with the surface of the side member.

⁷ Tabulated "Lateral Shear" design values require a minimum fastener penetration into the main member of 1.375" for fasteners less than 4" and 2.375" for all other lengths.

