



- Fastener lengths over 1-1/4" are designed to penetrate steel thickness up to .500".
- Thread to point ratio engineered to provide maximum pull out strength in heavy gauge steel
- EPDM rubber is vulcanized to steel washer. Moisture has no place to penetrate. The washer provides a secure seal even when driven at an angle.
- Applications include metal deck to structural steel or bar joists, & retrofit clips to structural steel.
- Fastener is also available without a bonded sealing washer.

SIZE	HEAD STYLE	CARTON QTY.	WEIGHT/M
12-24 x 1-1/4"	HWH	2500	12.6
12-24 x 1-1/2"	HWH	2000	16.2
12-24 x 2"	HWH	1500	22.1

LENGTHS LONGER THAN 2 INCHES ARE AVAILABLE BUT NON-STANDARD. CALL FOR PRICE AND AVAILABILITY.

FOR PROPER INSTALLATION. THE USE OF IMPACT DRIVERS ARE NOT RECOMMENDED FOR POWDER COATED OR ANY WET PAINTED FASTENER.

PULLOUT & PULLOVER VALUES ARE DETERMINED IN THE ST FASTENING SYSTEMS ENGINEERING LABORATORY USING STEEL PANELS/FRAMING & WOOD DENSITIES WHOSE STRUCTURAL PROPERTIES ARE FOUND IN PRESENT DAY PRODUCTS.

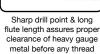
TECHNICAL INFORMATION	DRILL Point (DIA)	MAJOR DIAMETER	MINOR Diameter	WASHER FACE DIAMETER	HEAD ACROSS FLATS	NOM. TENSILE Strength	MIN. TORSIONAL Strength	NOM. SHEAR Strength
#12-24	.199/.195	.215/.209	.164 REF	.432/.398	NOM .312"	2803 LBS.	100 INLBS.	1999 LBS.

PULL OUT		MATERIAL													
STRENGTH		HRS PRIMED ONLY			AZ55 GALVALUME				G-90 GALVANIZED					HRS. PLATE	
(LBS. ULT.)	NOM. GAUGE	16	14	12	26	24	22	18	20	18	16	14	12	3/16"	1/4"
	THICKNESS	.060	.075	.105	.018	.024	.030	.048	.036	.048	.060	.075	.105	.187	.250
#12-24 N/A 924 1627		1627	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2556	3298		

PULL OVER			MATERIAL										
STRENGTH Value	DESIGNATION		AZ55 GA	LVALUME		G90	ALUMINUM	SLOT EDGE PANEL					
(LBS. ULT.)	NOM. GAUGE	29	26	24	22	20	21	29					
	THICKNESS	.014	.018	.024	.030	.036	.028	.014					
	#12-24 W/ 14 MM BONDED WASHER		801	996	1258	N/A	N/A	N/A					
(.398/.432	N/A	775	956	1078	N/A	N/A	N/A						
NOTES: 1. HRS (H	NOTES: 1. HRS (Hot Rolled Steel)												

structural steel joists up to .500" thick.





engagement begins.

HWH with EPDM bonded washer provides a secure seal to prevent leaks.

2. All strength values shown are ultimate values, expressed in LBS. Apply an appropriate safety factor to obtain design







5/16" Cupped HWH ZAMAC Zinc-Aluminum Alloy provides lifetime protection against red rust on the head & washer face. A written warranty is available upon

Fastener is designed to attach long-life metal roof panels such as GALVALUME to

- The head & washer face captures the rubber EPDM washer even when driven at an angle & are designed to maximize Pull over strength.
- For structural steel applications, a screwgun with RPM under 2000 is recommended for best performance.

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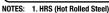




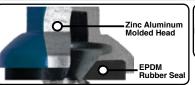
TECHNICAL INFORMATION	DRILL	MAJOR	MINOR	WASHER	HEAD	NOM. TENSILE	MIN. TORSIONAL	NOM. SHEAR
	Point (DIA)	Diameter	Diameter	FACE DIAMETER	ACROSS FLATS	Strength	Strength	STRENGTH
12-24	.199/.195	.215/.209	.164 REF.	.630	NOM .312"	1525** LBS.	100 IN-LBS.	1999 LBS.

PULL OUT			MATERIAL												
STRENGTH		HR	RS PRIMED ON	ILY	AZ55 GALVALUME				G-90 GALVANIZED					HRS. PLATE	
VALUE (LBS. ULT.)	NOM. GAUGE	16	14	12	26	24	22	18	20	18	16	14	12	3/16"	1/4"
(220.02)	THICKNESS	.060	.075	.105	.018	.024	.030	.048	.036	.048	.060	.075	.105	.187	.250
12-24		N/A	924	1525**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1525	*I BS

PULL OVER		MATERIAL									
STRENGTH Value	DESIGNATION		AZ55 GA	LVALUME		G90	ALUMINUM	SLOT EDGE PANEL			
(LBS, ULT.)	NOM. GAUGE	29	26	24	22	20	21	29			
(===:,	THICKNESS	.014	.018	.024	.030	.036	.028	.014			
12-24		637	1045	1303	1525**	N/A	N/A	N/A			



- 2. Pull over values calculated with EPDM rubber washer assembled to cupped head screw with .555" washer face.
- 3. All strength values shown are ultimate values, expressed in LBS. Apply an appropriate safety factor to obtain design
- 4. ** The value tabulated is the force at which the ZXL head breaks from the carbon steel body.



The Zinc-Aluminum alloy HWH prevents red rust from ever starting. ST Fastening Systems spring retainer sockets are recommended. ST Fastening Systems sockets are designed to allow for the added thickness of the powder coat.



Sharp drill point & long flute length assures proper clearance of heavy gauge metal before any thread engagement begins.