

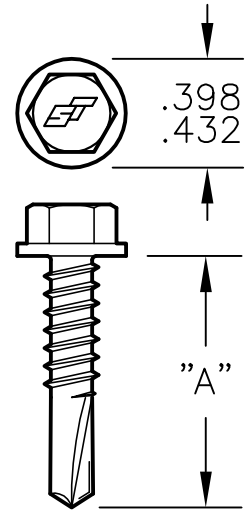
**STRONG PRODUCTS FROM A STRONG COMPANY**

# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0034

LENGTH "A": 3/4"; 1"; 1 1/4"; 1 1/2"; 2"; 2 1/2"; 3"; 4"	
PT. DIA.	.177/.181
MAJOR DIAMETER	.215/.209
MINOR DIAMETER	.164/.157
HEAD — ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2900 LBS
MIN. TORSIONAL STRENGTH:	92 IN-LBS
NOM. SHEAR STRENGTH:	1962 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXI HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18	16	14	12	
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101	
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098	
YIELD (KSI)	57	57	57	50	50	50	50	
VALUE (LBS. ULT.)	927	958	1678	729	787	1041	1372	

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD CONFIGURATION	DESIGNATION	AZ55 GALVALUME			G-90 GALVANIZED
	NOM. GAUGE	26	24	22	20
	THICKNESS	.019	.024	.032	.038
	BMT (INCHES)	.0175	.022	.030	.036
BONDED WASHER (14mm OD)	VALUE (LBS. ULT.)	780	1078	1355	1608
NONE (.398/.432 HWH DIA.)	VALUE (LBS. ULT.)	722	1040	1197	1419



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Tyler, Texas 75712  
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Fax 903-592-1583

#12-14 HWH (5/16" AF)  
SELF DRILLING FASTENER

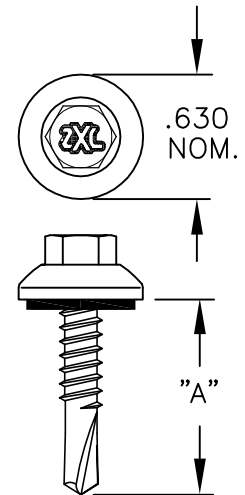
DATE:	REVISED	REVISION	ENGR. CHG.	No.
2-21-17				PDST-01

# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0166

LENGTH "A":	1; 1-1/4"; 1-1/2"; 2"; 3"
PT. DIA.	.181/.177
MAJOR DIAMETER	.215/.209
MINOR DIAMETER	.164/.157
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS.*
MIN. TORSIONAL STRENGTH:	92 IN-LBS
NOM. SHEAR STRENGTH:	1962 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18	16	14	12	
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101	
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098	
YIELD (KSI)	57	57	57	50	50	50	50	
VALUE (LBS. ULT.)	927	958	1678	729	787	1041	1372	

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	803	1091	1393	2159



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No. 12-14 CHWH ZXL  
LONG LIFE SELF DRILL

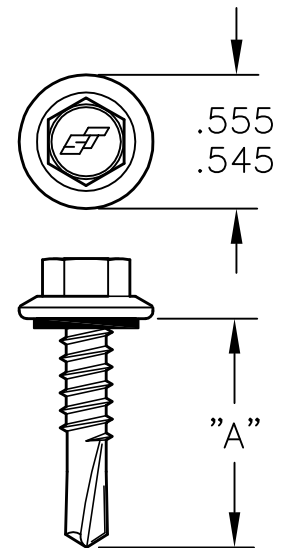
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0132

LENGTH "A": 3/4"; 1"; 1 1/4"; 1 1/2"; 2"; 2-1/2"; 3"  
 PT. DIA. .181/.177  
 MAJOR DIAMETER .215/.209  
 MINOR DIAMETER .164/.157  
 HEAD - ACROSS FLATS .305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 2900 LBS  
 MIN. TORSIONAL STRENGTH: 92 IN-LBS  
 NOM. SHEAR STRENGTH: 1962 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED			
NOM. GAUGE	16	14	12	18	16	14	12
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098
YIELD (KSI)	57	57	57	50	50	50	50
VALUE (LBS. ULT.)	927	958	1678	729	787	1041	1372

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
#12 CHWH	VALUE (LBS. ULT.)	687	1090	1299	1562



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#12-14 CHWH MAXX  
 SELF DRILLING FASTENER

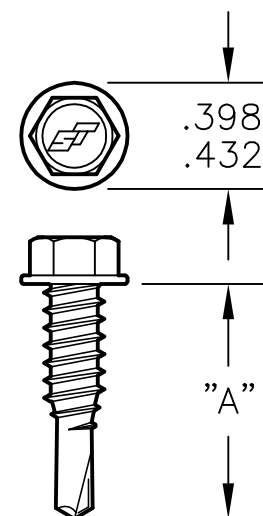
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0124

LENGTH "A":	7/8"
PT. DIA.	.156/.150
MAJOR DIAMETER	.246/.240
MINOR DIAMETER	.192/.185
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	3697 LBS.
MIN. TORSIONAL STRENGTH:	150 IN-LBS.
NOM. SHEAR STRENGTH:	2912 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	AZ-55 GALVALUME						G-90 GALVANIZED		
NOM. GAUGE	26	24	22	18			20		
THICKNESS (IN.)	.019	.024	.032	.0475			.038		
BMT (IN.)	.0175	.022	.030	.046			.036		
VALUE (LBS. ULT.)	342	378	418	1038			620		

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME				G-90 GALVANIZED	
	NOM. GAUGE	26	24	22	18	20	
	THICKNESS	.019	.024	.032	.047	.038	
	BMT (INCHES)	.0175	.022	.030	.046	.036	
BONDED WASHER (14mm OD)	VALUE (LBS. ULT.)	892	1076	1243	2003	1916	
NONE (.398/.432 HWH DIA.)	VALUE (LBS. ULT.)	722	990	1088	1912	1825	



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#1/4-14 HWH (5/16")  
SELF DRILLING FASTENER

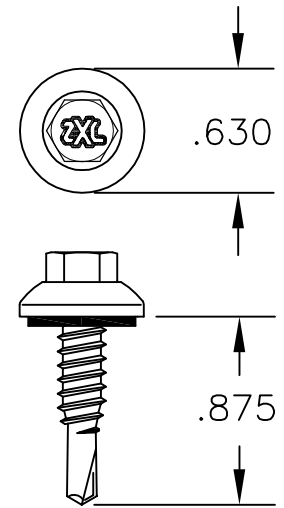
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-04
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

LENGTH "A":	7/8"
PT. DIA.	.156/.150
MAJOR DIAMETER	.246/.240
MINOR DIAMETER	.192/.185
HEAD - ACROSS FLATS	.305/.311

REF. DRWG. P-0167



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS. *
MIN. TORSIONAL STRENGTH:	150 IN-LBS.
NOM. SHEAR STRENGTH:	2850 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

RECOMMENDED TOOL SPEED IS 2500 RPM MAXIMUM.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	AZ-55 GALVALUME						G-90 GALVANIZED		
NOM. GAUGE	26	24	22	18			20		
THICKNESS (IN.)	.019	.0245	.032	.0475			.038		
BMT (IN.)	.0175	.022	.030	.046			.036		
VALUE (LBS. ULT.)	342	378	418	1038			620		

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	813	1439	1601	2037



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No. 1/4-14 x 7/8" ZXL  
LAP SELF DRILL FASTENER

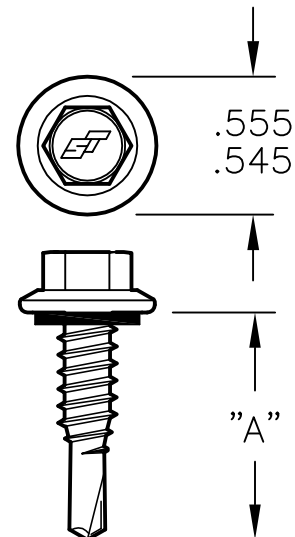
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-05
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0150

LENGTH "A":	7/8"
PT. DIA.	.156/.150
MAJOR DIAMETER	.246/.240
MINOR DIAMETER	.192/.185
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	3800 LBS.
MIN. TORSIONAL STRENGTH:	150 IN-LBS.
NOM. SHEAR STRENGTH:	2850 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

## PULL OUT STRENGTH

MAT'L	AZ-55 GALVALUME						G-90 GALVANIZED		
NOM. GAUGE	26	24	22	18			20		
THICKNESS (IN.)	.019	.024	.032	.0475			.038		
BMT (IN.)	.0175	.022	.030	.046			.036		
VALUE (LBS. ULT.)	342	378	418	1038			620		

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME					
	NOM. GAUGE	29	26	24	22		
	THICKNESS	.015	.019	.024	.032		
	BMT (INCHES)	.013	.0175	.022	.030		
CHWH (.555 DIA.)	VALUE (LBS. ULT.)	746	960	1261	1376		



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#1/4-14 MAXX  
LAP SELF DRILLING

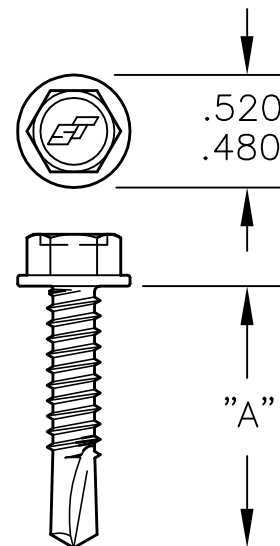
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-06
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0116

LENGTH "A": 3/4; 1 3/4"; 2"; 2 1/2"; 3"; 4"; 5"; 6"; 7"  
 PT. DIA. .210/.216  
 MAJOR DIAMETER .246/.240  
 MINOR DIAMETER .192/.185  
 HEAD — ACROSS FLATS .374/.367



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 3697 LBS.  
 MIN. TORSIONAL STRENGTH: 150 IN-LBS  
 NOM. SHEAR STRENGTH: 2912 LBS.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED			
NOM. GAUGE	16	14	12	18	16	14	12
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098
YIELD (KSI)	57	57	57	50	50	50	50
VALUE (LBS. ULT.)	986	1070	2003	807	890	1107	1327

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME					
	NOM. GAUGE		26	24	22		
	THICKNESS		.019	.024	.032		
	BMT (INCHES)		.0175	.022	.030		
BONDED WASHER (16mm OD)	VALUE (LBS. ULT.)		1001	1206	1649		
NONE .500 NOM. HWH DIA.	VALUE (LBS. ULT.)		878	1160	1503		



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#1/4-14 HWH (3/8" AF)  
 SELF DRILLING FASTENER

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-07
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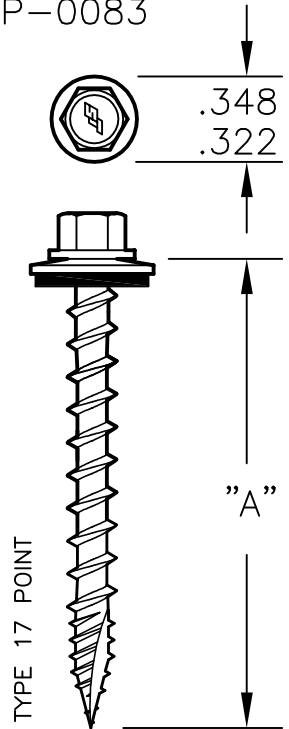


# PERFORMANCE DATA SHEET

REF. DRWG. P-0083

## DIMENSIONAL DATA

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"  
 PT. DIA. 30° SHARP POINT  
 MAJOR DIAMETER .205/.191  
 MINOR DIAMETER .121/.116  
 HEAD - ACROSS FLATS NOMINAL 0.25"



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1904 LBS.  
 MIN. TORSIONAL STRENGTH: 56 IN-LBS.  
 NOM. SHEAR STRENGTH: 1547 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

DUE TO CHANGES IN MANUFACTURING PROCEDURES USED BY LUMBER MILLS, INCLUDING LUMBER DENSITIES, FILLER MATERIAL, ADHESIVES, PLY QUANTITY AND THICKNESS, ETC. PULLOUT STRENGTHS HAVE BEEN UPDATED TO REFLECT THE VALUES USING MATERIAL AVAILABLE ON 4/21/15.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE		2x SPF		2X OAK
	PLY	PLY	PLY	OSB	1" PENET.	1-1/2" PENET.	1" PENET.	1-1/2" PENET.	1" PENET.
VALUE (LBS ULT.)	609	443	352	226	735	1402	488	928	1101

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUES SHOWN FOR 24 GA. WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	24
	THICKNESS	.015	.019	.024
	BMT (INCHES)	.013	.0175	.022
BONDED WASHER (12mm O.D.)	VALUE (LBS. ULT.)	378	629	721

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-16/8 HWH KWIKSEAL II  
 WOODBINDER (TYPE 17 POINT)

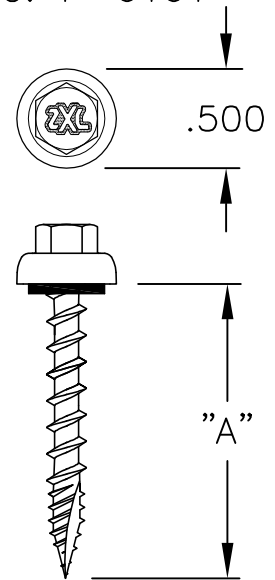
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-08
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0101

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"  
 PT. DIA. 30° SHARP POINT; TYPE 17  
 MAJOR DIAMETER .210/.200  
 MINOR DIAMETER .130/.126  
 HEAD — ACROSS FLATS .305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1585 LBS.\*  
 MIN. TORSIONAL STRENGTH: 60 IN-LBS.  
 NOM. SHEAR STRENGTH: 1574 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE		2x SPF		2X OAK
	PLY	PLY	PLY	OSB	1" PENET.	FULL PENET.	1" PENET.	FULL PENET.	1" PENET.
VALUE (LBS ULT.)	609	443	352	226	735	1402	488	928	1101

DUE TO CHANGES IN MANUFACTURING PROCEDURES USED BY LUMBER MILLS, INCLUDING LUMBER DENSITIES, FILLER MATERIAL, ADHESIVES, PLY QUANTITY AND THICKNESS, ETC. PULLOUT STRENGTHS HAVE BEEN UPDATED TO REFLECT THE VALUES USING MATERIAL AVAILABLE ON 4/21/15.

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.500 DIA.)	VALUE (LBS. ULT.)	658	927	1035	1386



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 Fax 903-592-1583

#10-16/8 ZXL KWIKSEAL II  
 LONG LIFE WOODBINDER; TYPE 17

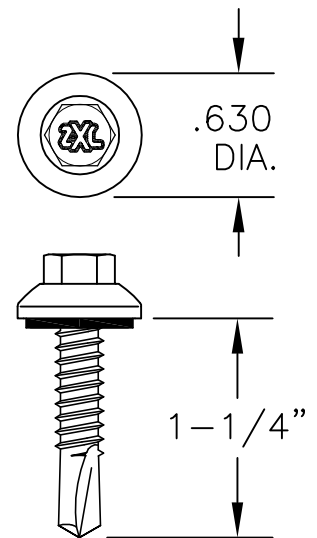
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-09
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

LENGTH "A":	1-1/4"
PT. DIA.	.198/.193
MAJOR DIAMETER	.246/.240
MINOR DIAMETER	.192/.185
HEAD - ACROSS FLATS	.305/.311

REF. DRWG. P-0111



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS.*
MIN. TORSIONAL STRENGTH:	150 IN-LBS
NOM. SHEAR STRENGTH:	2912 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18	16	14	12	
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101	
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098	
YIELD (KSI)	57	57	57	50	50	50	50	
VALUE (LBS. ULT.)	1333	1430	2204	886	1142	1386	2150	

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	791	1359	1444	1989



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#1/4-14 ZXL LONG LIFE  
SELF DRILLING FASTENER

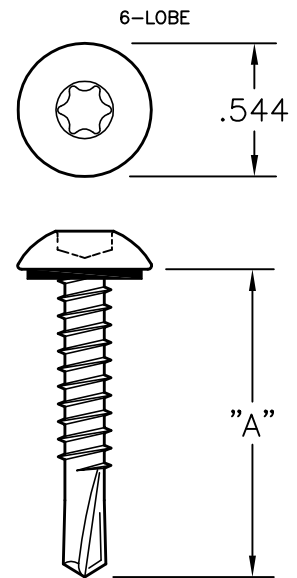
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-10
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0013

LENGTH "A":	1 1/4"
POINT DIAMETER:	.180/.175
HEAD DIAMETER:	.544
MAJOR DIAMETER	.209-.215
MINOR DIAMETER	.157-.164



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2900 LBS.
MIN. TORSIONAL STRENGTH:	92 in. lbs.
NOM. SHEAR STRENGTH:	1962 LBS.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18	16	14	12	
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101	
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098	
YIELD (KSI)	57	57	57	50	50	50	50	
VALUE (LBS. ULT.)	927	958	1678	729	787	1041	1372	

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
CHWH (.544)	VALUE (LBS. ULT.)	687	1090	1299	1562



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#12-14 ECLIPSE TRUSS HEAD  
SELF DRILLING FASTENER

DATE:  
2-21-17

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No.

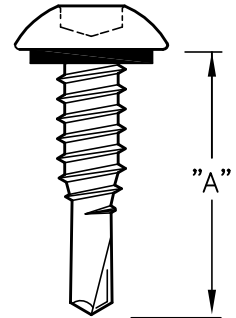
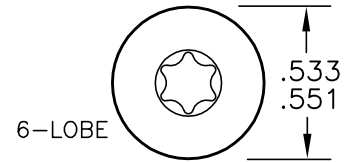
PDST-11

# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0032

LENGTH "A":	7/8"
POINT DIAMETER:	.156/.150
HEAD DIAMETER:	.551/.533
MAJOR DIAMETER:	.246/.240
MINOR DIAMETER:	.192/.185



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	3697 LBS.
MIN. TORSIONAL STRENGTH:	150 IN-LBS.
NOM. SHEAR STRENGTH:	2912 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	AZ-55 GALVALUME						G-90 GALVANIZED		
NOM. GAUGE	26	24	22				20	18	
THICKNESS (IN.)	.019	.024	.032				.038	.0475	
BMT (IN.)	.0175	.022	.030				.036	.046	
VALUE (LBS. ULT.)	342	378	418				620	1038	

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

## PULL OVER STRENGTH

MATERIAL  WASHER	TYPE	AZ55 GALVALUME			
	NOM. GA.	29 ga	26 ga	24 ga.	22 ga
	NOM. THICKNESS	.015	.019	.024	.032
	BASE METAL (BMT)	.013	.017	.022	.030
	YIELD STRENGTH (KSI)				
EPDM only	VALUE (LBS. ULT.)	746	960	1261	1376



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**#1/4-14 ECLIPSE TRUSS HEAD  
LAP SELF DRILLING FASTENER**

DATE:  
2-21-17

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REVISION

ENGR. CHG.

No.

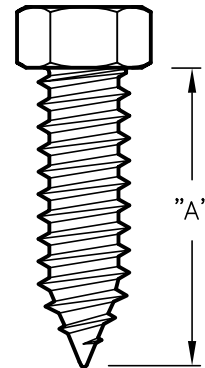
PDST-12

# PERFORMANCE DATA SHEET

DRWG. REF. P-0123

## DIMENSIONAL DATA:

LENGTH "A":	1", 1-1/2"
POINT TYPE:	GIMLET
MAJOR DIAMETER :	.280/.273
MINOR DIAMETER :	.220 NOM.
HEAD - ACROSS FLATS:	.374/.367



## STRENGTH CHARACTERISTICS:

NOM. TENSILE STRENGTH:	5160 LBS.
MIN. TORSIONAL STRENGTH:	220 MIN.
NOM. SHEAR STRENGTH:	3952 LBS.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED		
NOM. GAUGE	16	14	12	18		
THICKNESS (IN.)	.060	.074	.105	.047		
BMT (IN.)	.060	.074	.105	.046		
PREDRILL DIA.	.187	.218	.234	.187		
VALUE (LBS. ULT.)	1409	1429	2148	1119		

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.  
ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.  
AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME					
	NOM. GAUGE	29	26	24	22		
	THICKNESS	.015	.019	.024	.032		
	BMT (INCHES)	.013	.0175	.022	.030		
BONDED WASHER (16mm)	VALUE (LBS. ULT.)	556	890	1197	1270		

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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#17-14 HHAB  
SELF-TAPPING SCREW

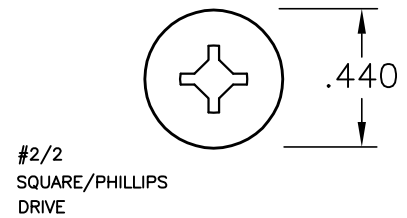
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-13
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

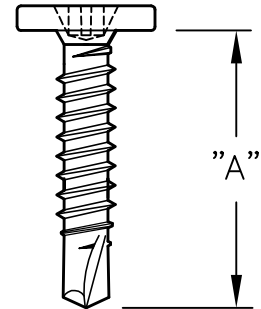
DRWG. REF. P-0028

LENGTH "A":	1", 1-1/2"
POINT DIAMETER:	.156/.151
HEAD DIAMETER:	.443/.423
MAJOR DIAMETER:	.189/.183
MINOR DIAMETER:	.141/.135



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	1920 LBS.
MIN. TORSIONAL STRENGTH:	61 IN-LBS.
NOM. SHEAR STRENGTH:	1633 LBS.



## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED		
NOM. GAUGE	16	14	12	18		
THICKNESS (IN.)	.065	.070	.106	.047		
BMT (IN.)	.065	.070	.106	.046		
VALUE (LBS. ULT.)	830	1006	1495	731		

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
NONE (.440 HEAD DIAMETER)	VALUE (LBS. ULT.)	529	779	1128	1512



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#10-16 PANCAKE HEAD SELF-DRILL  
#2/2 SQUARE/PHILLIPS RECESS

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-14
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. P-0122

LENGTH "A":	3/4", 1"
POINT TYPE:	30° GIMLET
HEAD (ACROSS FLATS)	.367/.375
MAJOR DIAMETER:	.240/.246
MINOR DIAMETER:	.185/.192

\* FASTENERS 3" LONG OR LONGER SHALL HAVE A MIN. 3" THREAD LENGTH.

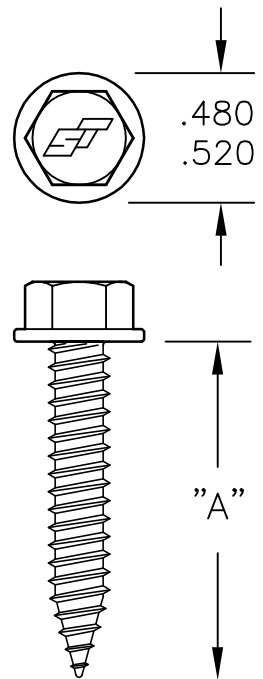
## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	3697 LBS.
MIN. TORSIONAL STRENGTH:	150 IN-LBS
NOM. SHEAR STRENGTH:	2808 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.



## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18	16	14	12	
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101	
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098	
YIELD (KSI)	57	57	57	50	50	50	50	
PREDRILL DIA.	.199	.199	.199	.156	.199	.199	.199	
VALUE (LBS. ULT.)	1181	1265	2143	1055	1073	1396	1774	

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME					
	NOM. GAUGE		26	24	22		
	THICKNESS		.019	.024	.032		
	BMT (INCHES)		.0175	.022	.030		
BONDED WASHER (16mm OD)	VALUE (LBS. ULT.)		1001	1206	1649		
NONE .500 NOM. HWH DIA.	VALUE (LBS. ULT.)		878	1160	1503		

NOTE: 26 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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1/4-14 HWH (3/8" AF) TYPE AB  
CARBON STEEL; SELF TAPPING

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-15
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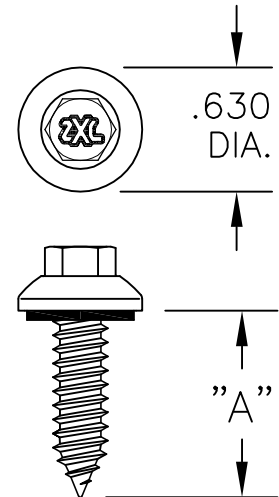


# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0094

LENGTH "A":	1"
PT. DIA.	GIMLET
MAJOR DIAMETER	.282/.273
MINOR DIAMETER	.220 NOM.
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS. *
MIN. TORSIONAL STRENGTH:	220 MIN.
NOM. SHEAR STRENGTH:	3952 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18				
THICKNESS (IN.)	.065	.070	.106	.047				
PRE-DRILL DIA.	3/16"	7/32"	15/64"	3/16"				
YIELD (KSI)	57	57	57	50				
VALUE (LBS. ULT.)	1409	1429	2128	1119				

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING. ALL 29 GA. THRU 22 GA. PANELS WERE PREDRILLED USING 0.228 DIA. DRILL TO SIMULATE REPAIR CONDITIONS.

## PULL OVER STRENGTH

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	696	1101	1205	1446



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#17-14 ZXL LONG LIFE  
TYPE AB SELF-TAPPING

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-16
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0069

LENGTH "A":	SEE KEY BELOW
POINT DIAMETER:	.195/.199
MAJOR DIAMETER:	.215/.209
MINOR DIAMETER:	.164 REF.
HEAD - ACROSS FLATS	.305/.311

## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2803 LBS.
MIN. TORSIONAL STRENGTH:	100 IN-LBS.
NOM. SHEAR STRENGTH:	1999 LBS.

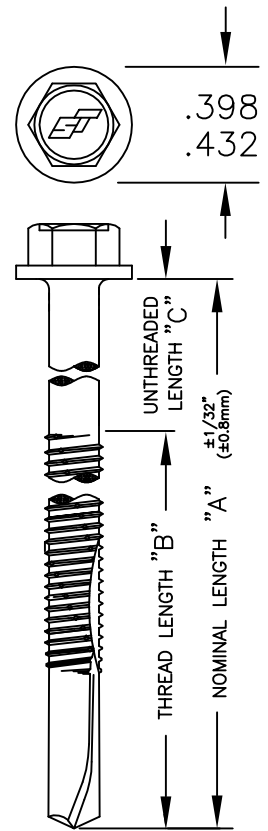
## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)		HRS PLATE		
NOM. GAUGE		14	12	3/16"	1/4"
THICKNESS (IN.)		.070	.106	.187	.250
BMT (IN.)		.070	.106	.187	.250
VALUE (LBS. ULT.)		924	1627	2556	3298

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	26	24	22
	THICKNESS	.019	.024	.032
	BMT (INCHES)	.0175	.022	.030
BONDED WASHER (14mm OD)	VALUE (LBS. ULT.)	801	996	1258
NONE (.398/.432 HWH DIA.)	VALUE (LBS. ULT.)	775	956	1078



KEY TO ILLUSTRATION:

6"	3"	3"
5"	3"	2"
4"	3"	1"
3"	FULL	N/A
2"	FULL	N/A
1 1/2"	FULL	N/A
1 1/4"	FULL	N/A
<b>A</b> LENGTH	<b>B</b> THREAD LENGTH	<b>C</b> UNTHREADED LENGTH (REF)

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.



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**#12-24 HWH HEAVY  
SELF-DRILLING FASTENER**

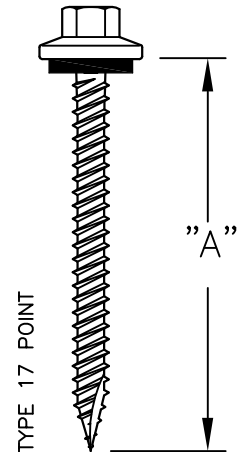
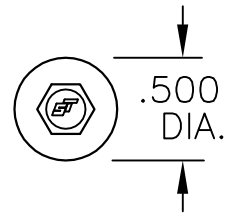
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-17
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF: DRAWING P-0036

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"  
 POINT DIAMETER: TYPE 17 GIMLET  
 HEX ACROSS FLATS: .250/.244  
 MAJOR DIAMETER: .181/.175  
 MINOR DIAMETER: .133/.127



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 2100 POUNDS  
 MIN. TORSIONAL STRENGTH: 48 IN-LBS  
 NOM. SHEAR STRENGTH: 1800 POUNDS

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4 PLY	1/2 PLY	7/16 OSB	2X SYP 1" PENETRATION	2X SYP 1-1/2' PENETRATION
VALUE (LBS ULT.)	661	363	200	708	1014

## PULL OVER STRENGTH

.500 DIA. STAINLESS STEEL CAP W/ EPDM WASHER	ALLOY DESIGNATION	AZ55 GALVALUME	ALUMINUM
	THICKNESS	0.019	.028
	BMT	0.017	.028
	YIELD STRENGTH (KSI)	60	--
EPDM (UNDER CHWH)	VALUE (LBS ULT.)	726	380

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#9-15 ST-XL WOODBINDER  
 STAINLESS STEEL CAPPED

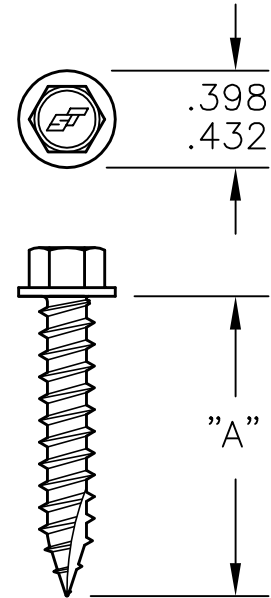
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0057

LENGTH "A": 1"; 1 1/2"; 2", 2 1/2"  
 POINT DIAMETER: TYPE 17 GIMLET  
 HEAD - ACROSS FLATS: .305/.312  
 MAJOR DIAMETER: .254/.248  
 MINOR DIAMETER: .185/.178



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 4270 LBS.  
 MIN. TORSIONAL STRENGTH: 125 IN-LBS  
 NOM. SHEAR STRENGTH: 2756 LBS.

## PULL OUT STRENGTH

MATERIAL:	HRS			3/4 PLY	5/8 PLY	1/2 PLY	7/16 OSB	2x Y. PINE	2x HEM.FIR	2x SPF	1x Y. PINE
NOM. GA.	16	14	12								
THICKNESS	.059	.074	.105	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(1)
PREDRILL	#8(.199)	#8(.199)	#8(.199)	—	—	—	—	—	—	—	—
VALUE	800	1250	2017	843	648	378	294	1187	669	651	746

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

(1) FULL PENETRATION  
 (2) 1" PENETRATION

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUES FOR 24, 22, AND 20 GA WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME				G-90 GALVANIZED	
	NOM. GAUGE	29	26	24	22	20	
	THICKNESS	.015	.019	.024	.032	.038	
	BMT (INCHES)	.013	.0175	.022	.030	.036	
BONDED WASHER (14mm OD)	VALUE (LBS. ULT.)	495	780	1078	1355	1608	
NONE (.398/.432 HWH DIA.)	VALUE (LBS. ULT.)	—	722	1040	1197	1419	

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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14-10 HWH (5/16" AF) TYPE A  
 SELF TAPPING W/ TYPE 17 POINT

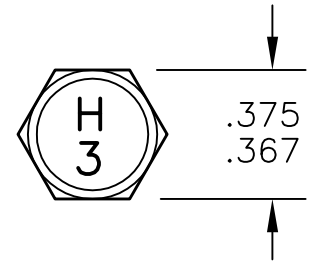
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-19
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0134

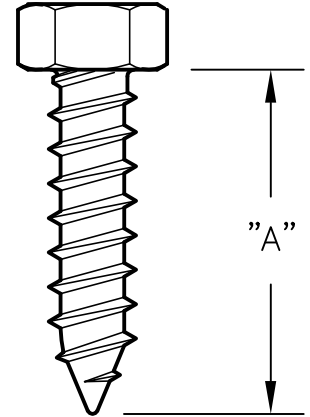
LENGTH "A": 3/4", 1", 1 1/4", 1 1/2", 2"  
 POINT TYPE: GIMLET  
 MAJOR DIAMETER: .254/.248  
 MINOR DIAMETER: .185/.178  
 HEAD — ACROSS FLATS: .375/.367



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 2900 LBS.  
 MIN. TORSIONAL STRENGTH: 125 IN-LBS  
 NOM. SHEAR STRENGTH: 2387 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.  
 ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.  
 AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.



## PULL OUT STRENGTH

MATERIAL:	HRS			3/4	5/8	1/2	7/16	19/32	23/32	2x	2x	1x
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	OSB	OSB	SPF	SPF	Y. PINE
THICKNESS	.059	.074	.105	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(1)
PREDRILL	#8(.199)	#8(.199)	#8(.199)	—	—	—	—	—	—	—	—	—
VALUE	800	1250	2017	661	613	418	252	309	460	1978	1013	902

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

(1) FULL PENETRATION  
 (2) 1" PENETRATION

## PULL OVER STRENGTH

STAINLESS WASHER	MATERIAL	G-90 GALVANIZED		AZ55 GALVALUME		
	NOM. GA.	18	20	22	24	26
	THICKNESS	.049	.035	.031	.023	.019
	BMT (INCHES)	.048	.036	.030	.022	.0175
5/8" OD BONDED	VALUE (LBS)	2336	1451	1325	1079	823

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUES FOR 24, 22, & 20 GA WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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#14-10 HHA 304 S.S.  
 SELF TAPPING FASTENER

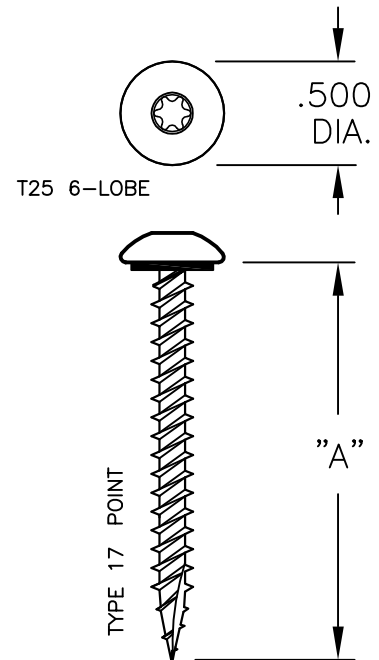
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-20
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# PERFORMANCE DATA SHEET

REF DRWG.: P-0090

## DIMENSIONAL DATA

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"  
 POINT DIAMETER: 30° SHARP POINT  
 MAJOR DIAMETER: .206/.200  
 MINOR DIAMETER: .126/.122  
 HEAD DIAMETER: .500



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 2023 LBS.  
 MIN. TORSIONAL STRENGTH: 75 IN-LBS.  
 NOM. SHEAR STRENGTH: 1653 LBS.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE	2x SPF	2X OAK
	PLY	PLY	PLY	OSB	1" PENETR.	1" PENETR.	1" PENETR.
VALUE (LBS ULT.)	536	420	380	190	929	640	1451

DUE TO CHANGES IN MANUFACTURING PROCEDURES USED BY LUMBER MILLS, INCLUDING LUMBER DENSITIES, FILLER MATERIAL, ADHESIVES, PLY QUANTITY AND THICKNESS, ETC. PULLOUT STRENGTHS HAVE BEEN UPDATED TO REFLECT THE VALUES USING MATERIAL AVAILABLE ON 4/21/15.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	
	THICKNESS	.015	.019	
	BMT (INCHES)	.013	.0175	
NONE (EPDM ONLY)	VALUE (LBS. ULT.)	688	879	

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-11 TRUSS HEAD ECLIPSE  
 SELF TAPPING WOODBINDER

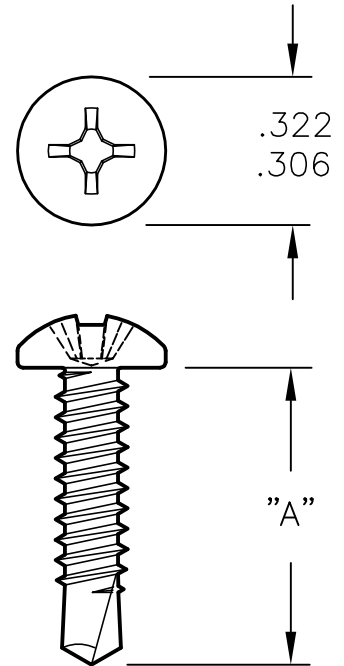
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-21
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# PERFORMANCE DATA SHEET

REF. DRWG. P-0161

## DIMENSIONAL DATA

LENGTH "A": 1/2"; 3/4"; 1"; 1 1/4"; 1 1/2"  
 POINT DIAMETER: .136/.131  
 MAJOR DIAMETER: .166/.161  
 MINOR DIAMETER: .122/.116



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1844 LBS.  
 MIN. TORSIONAL STRENGTH: 42 IN-LBS.  
 NOM. SHEAR STRENGTH: 1138 LBS.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED		
NOM. GAUGE	16	14	12	18		
THICKNESS (IN.)	.065	.070	.106	.047		
BMT (IN.)	.065	.070	.106	.046		
VALUE (LBS. ULT.)	860	984	1636	604		

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	24
	THICKNESS	.015	.019	.024
	BMT (INCHES)	.013	.0175	.022
NONE (.322 HEAD DIAMETER)	VALUE (LBS. ULT.)	421	636	854

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUE FOR 24 GA. WAS OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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#8-18 PHILLIPS PAN HEAD  
 SELF-DRILLING FASTENER

DATE:  
2-21-17

REVISED

REVISION

ENGR. CHG.

No.

PDST-22

# PERFORMANCE DATA SHEET

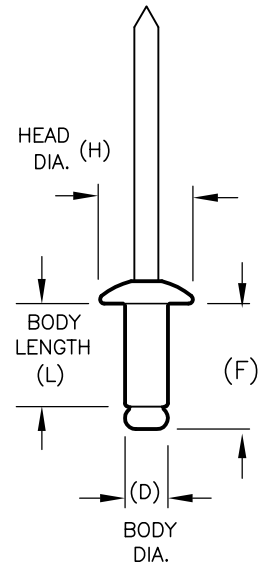
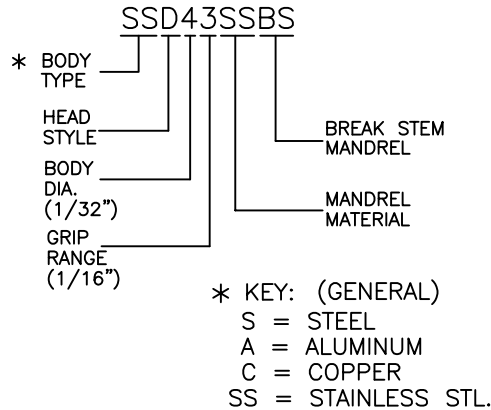
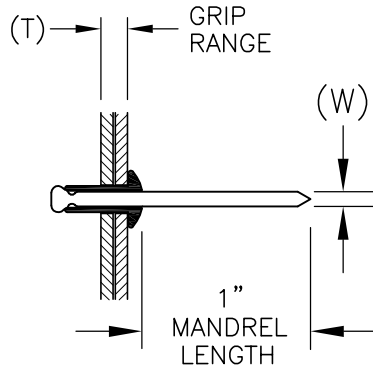


TABLE I: DIMENSIONS OF ST FASTENING SYSTEMS STANDARD RIVETS:

RIVET SERIES No.	NOM. RIVET SIZE	D		H		W	F	E	L
		BODY DIAMETER		HEAD DIAMETER		MANDREL DIAMETER	BLIND SIDE PROJ.	HEAD HEIGHT	BODY LENGTH
		MAX.	MIN.	MAX.	MIN.				
4	1/8"	.128	.122	.262	.238	.076	L+.120	.040	SEE TABLE II

TABLE II: APPLICATION DATA

RIVET SERIES No.	NOM. RIVET SIZE	RECOMMENDED DRILL SIZE	RIVET No.	MATERIAL REFERENCE (**)	GRIP RANGE ( T )		BODY LENGTH ( L )	ST FASTENING SYSTEMS STANDARDS (**)
					MIN.	MAX.		
4	1/8"	#30 (.129)	42	S, A, C	.063	.125	.275	S = STEEL BODY STEEL MANDREL A = ALUMINUM BODY ALUMINUM MANDREL C = COPPER BODY STEEL MANDREL SS = STAINLESS STEEL BODY STAINLESS STEEL MANDREL
			43	SS	.126	.187	.337	
			44	S, A, C, SS	.188	.250	.400	
			46	S	.313	.375	.525	

TABLE III: MECHANICAL PROPERTIES OF ST FASTENING SYSTEMS RIVETS

GRADE DESIGNATION	RIVET BODY MATERIAL	MANDREL MATERIAL	ULTIMATE SHEAR (LBS. MIN.)	ULTIMATE TENSILE (LBS. MIN.)	PULL-OUT IN 18 GA. MIN. (ACTUAL TESTED TENSILE STRENGTH)
10	ALUMINUM	ALUMINUM	120	150	189 LBS.
30	STEEL	STEEL	260	310	437 LBS.
51	STAINLESS STEEL	STAINLESS STEEL	420	530	643 LBS.
20	COPPER ALLOY #110	COATED STEEL	NO DATA	NO DATA	NO DATA

NOTE: PULL-OUT STRENGTH OF No. 4 DIAMETER RIVETS IN STEEL, STAINLESS STEEL, OR ALUMINUM BODY TYPES INSTALLED IN 18 GA. STEEL SUBSTRATES OR HEAVIER EXCEED THE TABULATED MINIMUM TENSILE STRENGTH AS SHOWN IN TABLE III.

## NOTES:

- TENSILE AND SHEAR DATA TABULATED REPRESENTS MINIMUM ULTIMATE REQUIRED VALUES AS TABULATED IN IFI-114 STANDARD FOR BREAK MANDREL BLIND RIVETS.
- ONLY ST FASTENING SYSTEMS STANDARD RIVETS ARE SHOWN ON THIS DOCUMENT. CONTACT ST FASTENING SYSTEMS FOR VALUES FOR RIVETS OF OTHER SIZES AND MATERIAL TYPES.



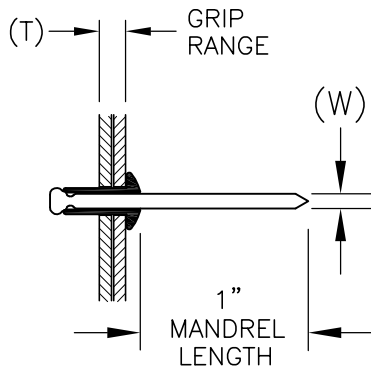
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## No. 4 SERIES BLIND RIVET DATA BREAK MANDREL TYPE

DATE:	REVISED	REVISION	ENGR. CHG.	No.
2-21-17				PDST-23



# PERFORMANCE DATA SHEET



SSD43SSBS

\* BODY TYPE  
HEAD STYLE  
BODY DIA. (1/32")  
GRIP RANGE (1/16")

BREAK STEM MANDREL  
MANDREL MATERIAL

\* KEY: (GENERAL)  
S = STEEL  
A = ALUMINUM

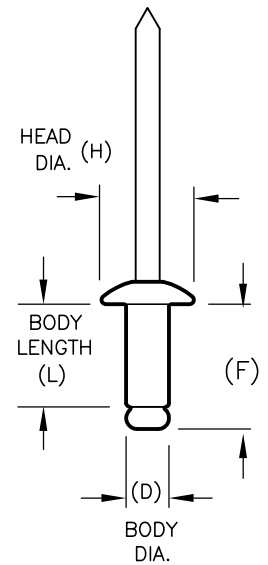


TABLE I: DIMENSIONS OF ST FASTENING SYSTEMS STANDARD RIVETS:

RIVET SERIES No.	NOM. RIVET SIZE	D		H		W	F	E	L
		BODY DIAMETER		HEAD DIAMETER		MANDREL DIAMETER	BLIND SIDE PROJ.	HEAD HEIGHT	BODY LENGTH
		MAX.	MIN.	MAX.	MIN.				
5	5/32"	.159	.153	.328	.296	.095	L+.140	.050	SEE TABLE II

TABLE II: APPLICATION DATA

RIVET SERIES No.	NOM. RIVET SIZE	RECOMMENDED DRILL SIZE	RIVET No.	MATERIAL REFERENCE (**)	GRIP RANGE RANGE ( T )		BODY LENGTH ( L )	ST FASTENING SYSTEMS STANDARDS (**)
					MIN.	MAX.		
5	5/32"	#20 (.161)	52	---	.020	.125	.300	S = STEEL BODY STEEL MANDREL A = ALUMINUM BODY ALUMINUM MANDREL
			53	S, A	.126	.187	.362	
			54	---	.188	.250	.425	
			56	---	.313	.375	.550	

TABLE III: MECHANICAL PROPERTIES OF ST FASTENING SYSTEMS RIVETS

GRADE DESIGNATION	RIVET BODY MATERIAL	MANDREL MATERIAL	ULTIMATE SHEAR (LBS. MIN.)	ULTIMATE TENSILE (LBS. MIN.)	PULL-OUT IN 18 GA. MIN. (ACTUAL TESTED TENSILE STRENGTH)
10	ALUMINUM	ALUMINUM	190	230	254 LBS.
30	STEEL	STEEL	370	470	491 LBS.
51	STAINLESS STEEL	STAINLESS STEEL	650	820	886 LBS.
20	COPPER ALLOY #110	COATED STEEL	NO DATA	NO DATA	NO DATA

NOTE: PULL-OUT STRENGTH OF No. 5 DIAMETER RIVETS IN STEEL, STAINLESS STEEL, OR ALUMINUM BODY TYPES INSTALLED IN 18 GA. STEEL SUBSTRATES OR HEAVIER EXCEED THE TABULATED MINIMUM TENSILE STRENGTH AS SHOWN IN TABLE III.

NOTES:

1. TENSILE AND SHEAR DATA TABULATED REPRESENTS MINIMUM ULTIMATE REQUIRED VALUES AS TABULATED IN IFI-114 STANDARD FOR BREAK MANDREL BLIND RIVETS.

(\*\*) 2. ONLY ST FASTENING SYSTEMS STANDARD RIVETS ARE SHOWN ON THIS DOCUMENT. CONTACT ST FASTENING SYSTEMS FOR VALUES FOR RIVETS OF OTHER SIZES AND MATERIAL TYPES.



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## No. 5 SERIES BLIND RIVET DATA BREAK MANDREL TYPE

DATE:	REVISED	REVISION	ENGR. CHG.	No.
2-21-17				PDST-24

# PERFORMANCE DATA SHEET

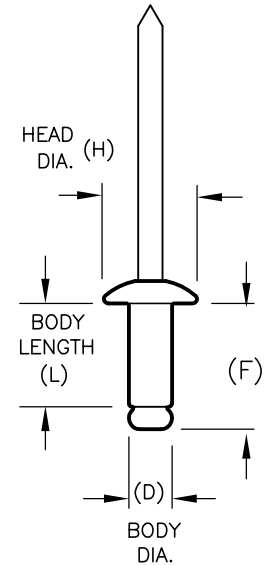
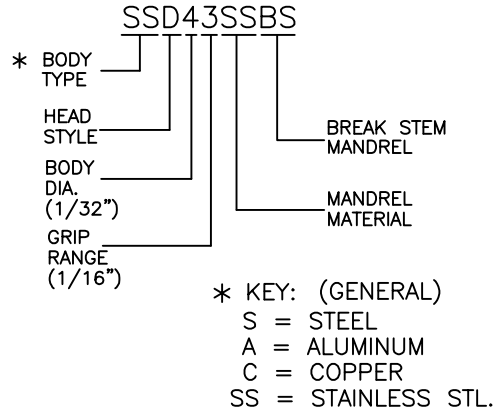
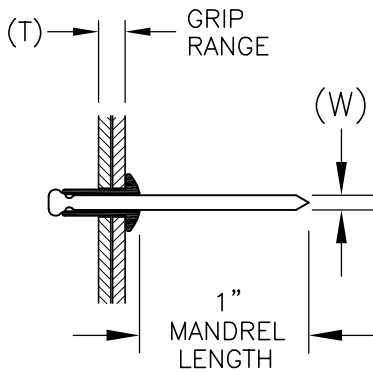


TABLE I: DIMENSIONS OF ST FASTENING SYSTEMS STANDARD RIVETS:

RIVET SERIES No.	NOM. RIVET SIZE	D		H		W	F	E	L
		BODY DIAMETER		HEAD DIAMETER		MANDREL DIAMETER	BLIND SIDE PROJ.	HEAD HEIGHT	BODY LENGTH
		MAX.	MIN.	MAX.	MIN.				
6	3/16"	.191	.183	.394	.356	.114	L+.160	.060	SEE TABLE II

TABLE II: APPLICATION DATA

RIVET SERIES No.	NOM. RIVET SIZE	RECOMMENDED DRILL SIZE	RIVET No.	MATERIAL REFERENCE (**)	GRIP RANGE RANGE ( T )		BODY LENGTH ( L )	ST FASTENING SYSTEMS STANDARDS (**)
					MIN.	MAX.		
6	3/16"	#11 (.191)	66	SS, A	.251	.375	.575	A = ALUMINUM BODY ALUMINUM MANDREL  SS = STAINLESS STEEL BODY STAINLESS STEEL MANDREL
			68	SS, A	.376	.500	.700	

TABLE III: MECHANICAL PROPERTIES OF ST FASTENING SYSTEMS RIVETS

GRADE DESIGNATION	RIVET BODY MATERIAL	MANDREL MATERIAL	ULTIMATE SHEAR (LBS. MIN.)	ULTIMATE TENSILE (LBS. MIN.)	PULL-OUT IN 14 GA. MIN. (ACTUAL TESTED TENSILE STRENGTH)
10	ALUMINUM	ALUMINUM	260	320	471
30	STEEL	STEEL	540	680	NO DATA
51	STAINLESS STEEL	STAINLESS STEEL	950	1200	1570
20	COPPER ALLOY #110	COATED STEEL	NO DATA	NO DATA	NO DATA

NOTE: PULL-OUT STRENGTH OF No. 6 DIAMETER RIVETS IN STEEL, STAINLESS STEEL, OR ALUMINUM BODY TYPES INSTALLED IN 14 GA. STEEL SUBSTRATES OR HEAVIER EXCEED THE TABULATED MINIMUM TENSILE STRENGTH AS SHOWN IN TABLE III.

## NOTES:

1. TENSILE AND SHEAR DATA TABULATED REPRESENTS MINIMUM ULTIMATE REQUIRED VALUES AS TABULATED IN IFI-114 STANDARD FOR BREAK MANDREL BLIND RIVETS.

(\*\*)2. ONLY ST FASTENING SYSTEMS STANDARD RIVETS ARE SHOWN ON THIS DOCUMENT. CONTACT ST FASTENING SYSTEMS FOR VALUES FOR RIVETS OF OTHER SIZES AND MATERIAL TYPES.



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## No. 6 SERIES BLIND RIVET DATA BREAK MANDREL TYPE

DATE:	REVISED	REVISION	ENGR. CHG.	No.
2-21-17				PDST-25

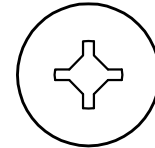
# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRAWING P-0244

(W/ SPECIAL 1000 HR.  
SALT SPRAY COATING)

LENGTH "A": 1", 1-1/2", 2"  
POINT TYPE: 30° GIMLET SHARP POINT  
HEAD DIAMETER: .447/.423  
MAJOR DIAMETER: .204/.198  
MINOR DIAMETER: .128/.122



#2/2  
SQUARE/PHILLIPS  
DRIVE

## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1981 LBS.  
MIN. TORSIONAL STRENGTH: 48 IN-LBS.  
NOM. SHEAR STRENGTH: 1428 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE  
USED AS A GUIDE FOR TYPICAL STRENGTH  
CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE  
VALUES, EXPRESSED IN POUNDS.

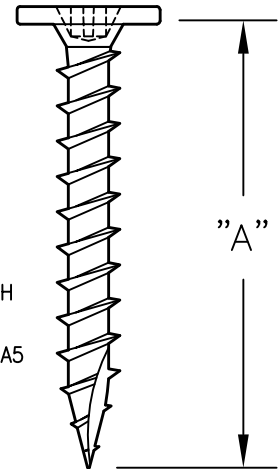
AN APPROPRIATE FACTOR OF SAFETY MUST BE  
APPLIED BY THE USER TO OBTAIN ALLOWABLE  
LIMITS FOR DESIGN.

MATERIAL: CARBON STEEL - HARDENED AND TEMPERED  
FINISH TO BE SILVER RUSPERT TYPE II OVER ZINC  
ELECTROPLATE. (1000 HRS. SALT SPRAY)

RESISTANCE; 15 CYCLES SFW 2.0S DIN 50018 KESTERNICH

MEETS THE REQUIREMENTS OF FLORIDA BUILDING CODE

TAS 114 APPENDIX E, SECTION 2 ASTM G85-11, ANNEX A5



## PULL OUT STRENGTH

SUBSTRATE	3/4"	1/2"	7/16"	2X Y. PINE	2X SPF
	PLY	PLY	OSB	1" PENETR.	1" PENETR.
VALUE (LBS. ULT.)	678	352	178	868	597

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
NONE	VALUE (LBS. ULT.)	529	778	1128	1512

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED  
USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES  
WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF  
PAINT FINISH AND/OR METALLIC PROTECTIVE COATING.

MIAMI-DADE COUNTY  
APPROVED

No. L 10-0331.10



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#10-9 PANCAKE HEAD ; SQ./PHILLIPS DRIVE  
W/ SPECIAL 1000 HR. SALT SPRAY COATING

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-26
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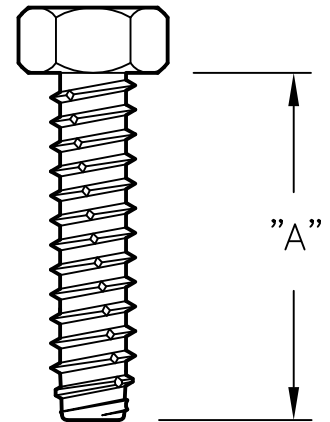
# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0133

LENGTH "A": \* 3/4", 1", 1 1/4", 1 1/2", 2"  
POINT TYPE: TYPE B  
MAJOR DIAMETER: .246/.240  
MINOR DIAMETER: .185/.192  
HEAD - ACROSS FLATS: .375/.367

LONGER LENGTHS AVAILABLE ON SPECIAL  
\* ORDER. FASTENERS 3" LONG OR LONGER  
SHALL HAVE A MIN. 3" THREAD LENGTH.



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 3000 LBS.  
MIN. TORSIONAL STRENGTH: 142 IN-LBS.  
NOM. SHEAR STRENGTH: 2368 LBS

TECHNICAL DATA PROVIDED HEREIN IS TO BE  
USED AS A GUIDE FOR TYPICAL STRENGTH  
CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE  
VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE  
APPLIED BY THE USER TO OBTAIN ALLOWABLE  
LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MATERIAL:	HRS			
NOM. GA.	1/4" PL.	3/16" PL.	12 GA.	14 GA.
THICKNESS	.250	.187	.105	.074
PREDRILL	#2(.221)	#2 (.221)	#8(.199)	#8(.199)
VALUE	3364	2598	1973	1018

NOTE: RECOMMENDED INSTALLATION SPEED  
FOR TYPE 304 STAINLESS TAPPERS IS  
600-1000 RPM. DO NOT USE IMPACT TOOLS.

## PULL OVER STRENGTH

WASHER	MATERIAL	AZ55 GALVALUME					
	NOM. GA.	18	20	22	24	26	
	THICKNESS	.047	.038	.032	.024	.019	
5/8" OD BONDED	VALUE (LBS)	2336	1451	1325	1079	823	

NOTE: VALUE SHOWN FOR 26 GA WAS OBTAINED USING  
80 KSI STEEL. VALUES SHOWN FOR 24, 22, 20, AND  
18 GA WAS OBTAINED USING 50 KSI MATERIAL.



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#1/4-14 HHB SELF TAPPING  
TYPE 304 STAINLESS STEEL

DATE:  
2-21-17

REVISED

REVISION

ENGR. CHG.

No.

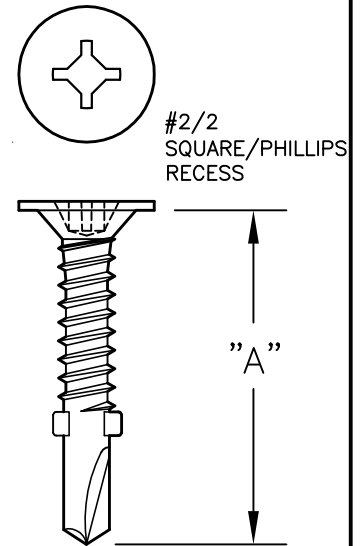
PDST-27

# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0039

LENGTH "A":	1 5/8"
POINT DIAMETER:	.156/.151
HEAD DIAMETER:	.440 NOM.
MAJOR DIAMETER:	.189/.183
MINOR DIAMETER:	.141/.135



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	1920 LBS.
MIN. TORSIONAL STRENGTH:	61 IN-LBS.
NOM. SHEAR STRENGTH:	1633 LBS.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			A36 HRS	G-90 GALVANIZED		
NOM. GAUGE	16	14	12	3/16" PL.	18		
THICKNESS (IN.)	.065	.070	.106	.187	.047		
BMT (IN.)	.065	.070	.106	.187	.046		
VALUE (LBS. ULT.)	847	916	1085	2371 *	587		

\* DENOTES TENSILE FAILURE OF FASTENER.

## PULL OVER STRENGTH

MATERIAL	DESIGNATION	CDX PLYWOOD
WASHER	THICKNESS	15/32" (NOM 1/2")
NONE (.440 HEAD DIAMETER)	VALUE (LBS. ULT.)	680 (NOTE 1)

### NOTES:

1. WAFFER HEAD FLANGES BROKE DURING PULLOVER TESTING IN NOM. 1/2" PLYWOOD. VALUE TABULATED FOR 1/2" PLYWOOD REPRESENTS THE ULTIMATE STRENGTH OF THE FASTENER. PULLOVER STRENGTH FOR PLYWOOD THICKNESSED GREATER THAN 1/2" CAN BE CONSIDERED SAME VALUE AS TABULATED (680 LBS. ULT.)
2. BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATINGS.
3. TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.  
ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.  
AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.
4. MAX. PLYWOOD THICKNESS FOR USE WITH THIS PLYMETAL FASTENER IS 3/4"



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Fax 903-592-1583

#10-16 PLYMETAL SELF-DRILL  
2/2 SQUARE/PHILLIPS RECESS

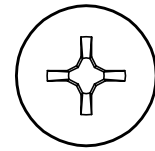
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-28
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0018

LENGTH "A":	2.75"
POINT DIAMETER:	.226 / .220
HEAD DIAMETER:	.507 / .452
MAJOR DIAMETER:	.250 / .242
MINOR DIAMETER:	.187 REF.



#3 PHILLIPS

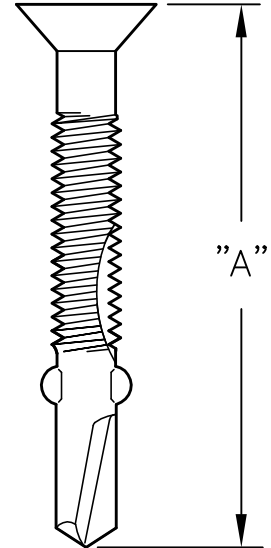
## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	4270 LBS.
MIN. TORSIONAL STRENGTH:	168 IN-LBS.
NOM. SHEAR STRENGTH:	3000 LBS.

## PULL OUT STRENGTH

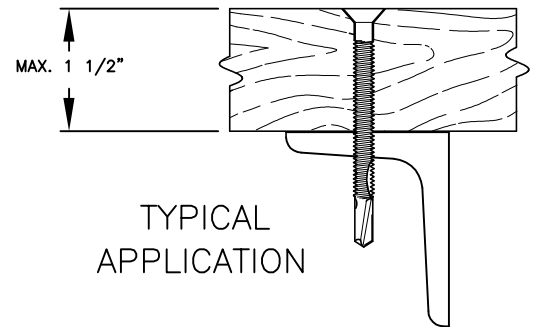
MAT'L	HRS (PRIMED ONLY)			A36 HRS	
NOM. GAUGE	16	14	12	3/16" PL.	1/4" PL.
THICKNESS (N.)	.065	.070	.106	.187	.250
BMT (N.)	.065	.070	.106	.187	.250
VALUE (LBS. ULT.)	970	1165	1838	3145	5240 *

\* DENOTES TENSILE FAILURE OF FASTENER.



## PULL OVER STRENGTH

MATERIAL	DESIGNATION	YELLOW PINE CCA PRESSURE TREATED
WASHER / HEAD DIAMETER	THICKNESS	2X NOMINAL ( 1.5 ACTUAL )
NONE (.450 HEAD DIAMETER)	VALUE (LBS. ULT.)	1383



TYPICAL  
APPLICATION

### NOTES:

1. YELLOW PINE USED IN PULLOVER TESTING WAS DENSE GRAIN, CCA PRESSURE TREATED MATERIAL NORMALLY USED FOR NAILERS THAT ARE SECURED TO BAR JOISTS WITH HEADER SELF DRILLS.
2. BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATINGS.
3. TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.  
ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.  
AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.



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#1/4-20 FLAT HEAD REAMER  
SELF-DRILLING FASTENER

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-29
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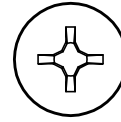
# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0017

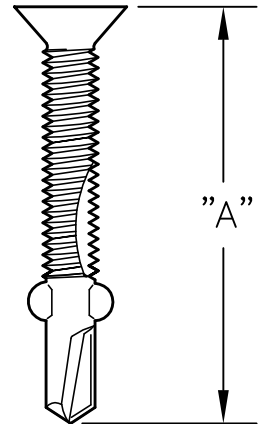
LENGTH "A":	2", 2 1/2"
POINT DIAMETER:	.191/.197
HEAD DIAMETER:	.389 NOM.
MAJOR DIAMETER:	.216/.209
MINOR DIAMETER:	.165 REF.

#3 PHILLIPS



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2800 LBS.
MIN. TORSIONAL STRENGTH:	100 IN-LBS.
NOM. SHEAR STRENGTH:	2000 LBS.



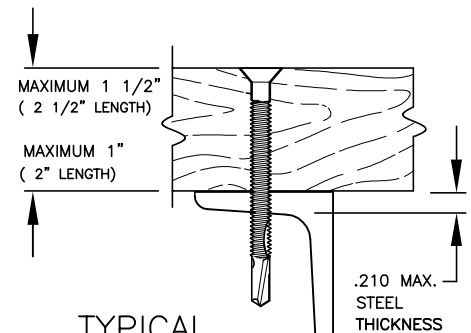
## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			A36 HRS	
NOM. GAUGE	16	14	12	3/16" PL.	1/4" PL.
THICKNESS (IN.)	.065	.070	.106	.187	.250
BMT (IN.)	.065	.070	.106	.187	.250
VALUE (LBS. ULT.)	832	947	1480	2582	3494 *

\* DENOTES TENSILE FAILURE OF FASTENER.

## PULL OVER STRENGTH

MATERIAL	DESIGNATION	YELLOW PINE
		CCA PRESSURE TREATED
WASHER / HEAD DIAMETER	THICKNESS	2X NOMINAL ( 1.5 ACTUAL )
NONE (.450 HEAD DIAMETER)	VALUE (LBS. ULT.)	1302



TYPICAL  
APPLICATION

### NOTES:

1. YELLOW PINE USED IN PULLOVER TESTING WAS DENSE GRAIN, CCA PRESSURE TREATED MATERIAL NORMALLY USED FOR NAILERS THAT ARE SECURED TO BAR JOISTS WITH HEADER SELF DRILLS.
2. BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATINGS.
3. TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.  
ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.  
AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.



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#12-24 FLAT HEAD REAMER  
SELF-DRILLING FASTENER

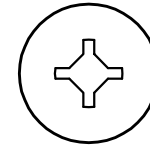
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-30
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRWG. REF. P-0136

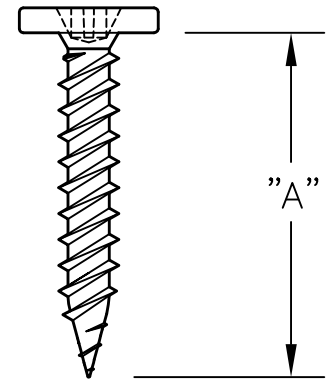
LENGTH "A": 1"; 1 1/2"  
 POINT TYPE: 30° GIMLET SHARP POINT  
 HEAD DIAMETER: .440 NOM.  
 MAJOR DIAMETER: .194/.188  
 MINOR DIAMETER: .133/.126



#2/2  
 SQUARE/PHILLIPS  
 DRIVE

## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH : 1450 LBS.  
 MIN. TORSIONAL STRENGTH: 48 IN-LBS.  
 NOM. SHEAR STRENGTH: 1113 LBS.



TECHNICAL DATA PROVIDED HEREIN IS TO BE  
 USED AS A GUIDE FOR TYPICAL STRENGTH  
 CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE  
 VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE  
 APPLIED BY THE USER TO OBTAIN ALLOWABLE  
 LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE	2X SPF
	PLY	PLY	PLY	OSB	1" PENETR.	1" PENETR.
VALUE (LBS. ULT.)	656	518	358	274	988	510

ALL PULL-OUT TESTING INTO PLYWOOD AND OSB  
 REPRESENTS FULL DIAMETER THREAD ENGAGEMENT.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
NONE	VALUE (LBS. ULT.)	529	778	1128	1512

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF  
 PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-12 PANCAKE HEAD TYPE A  
 304 STAINLESS STL. ; SQ./PHILLIPS DR.

DATE:  
 2-21-17

REVISED

REVISION

ENGR. CHG.

No.

PDST-31

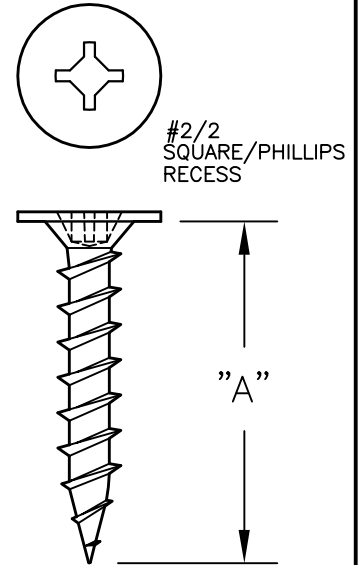


# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRAWING P-0091

LENGTH "A": 1", 1-1/2", 2"  
 POINT TYPE: 30° GIMLET SHARP POINT  
 HEAD DIAMETER: .450 NOM.  
 MAJOR DIAMETER: .204/.198  
 MINOR DIAMETER: .128/.122



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1981 LBS.  
 MIN. TORSIONAL STRENGTH: 66 IN-LBS.  
 NOM. SHEAR STRENGTH: 1428 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	1/2	7/16	2X Y. PINE	2X SPF	2X HEM.-FIR
	PLY	OSB	1" PENETR.	1" PENETR.	1" PENETR.
VALUE (LBS. ULT.)	478	293	952	665	538

## PULL OVER STRENGTH

MATERIAL  WASHER	DESIGNATION	SLOT-EDGE PANEL
	NOM. GAUGE	29 GA.
	THICKNESS	.0175
	BMT (INCHES)	.014
NONE	VALUE (LBS. ULT.)	685

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-9 WAFER HEAD; SQ./PHILLIPS  
 SELF-TAPPING SHARP POINT

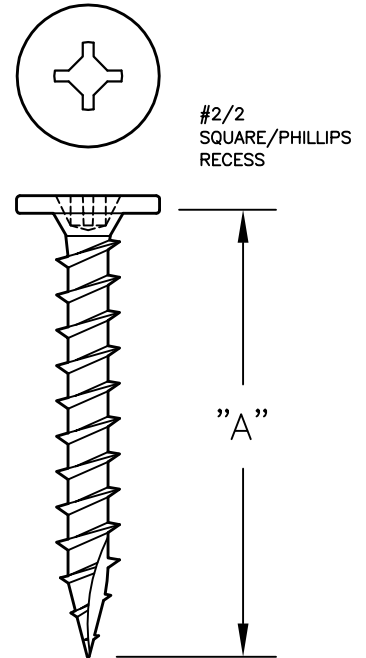
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-32
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRAWING P-0290

LENGTH "A":	1", 1-1/2", 2"
POINT TYPE:	30° TYPE 17 POINT
HEAD DIAMETER:	.447/.423
MAJOR DIAMETER:	.204/.198
MINOR DIAMETER:	.128/.122



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	1981 LBS.
MIN. TORSIONAL STRENGTH:	66 IN-LBS.
NOM. SHEAR STRENGTH:	1428 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	1/2	7/16	2X Y. PINE	2X SPF	2X HEM.-FIR
	PLY	OSB	1" PENETR.	1" PENETR.	1" PENETR.
VALUE (LBS. ULT.)	478	293	952	665	538

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
NONE	VALUE (LBS. ULT.)	529	778	1128	1512

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND/OR METALLIC PROTECTIVE COATING.



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**#10-9 PANCAKE HEAD ; TYPE 17 POINT  
2/2 SQUARE/PHILLIPS RECESS**

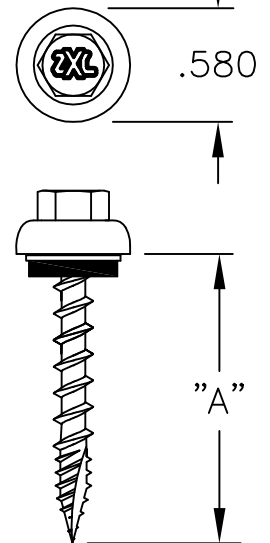
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. <b>PDST-33</b>
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0300

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"  
 PT. DIA. 30° SHARP POINT; TYPE 17  
 MAJOR DIAMETER .210/.200  
 MINOR DIAMETER .130/.126  
 HEAD — ACROSS FLATS .305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1585 LBS.\*  
 MIN. TORSIONAL STRENGTH: 60 IN-LBS.  
 NOM. SHEAR STRENGTH: 1574 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE		2x SPF		2X OAK
	PLY	PLY	PLY	OSB	1" PENET.	FULL PENET.	1" PENET.	FULL PENET.	1" PENET.
VALUE (LBS ULT.)	707	591	400	310	1052	1552	492	1042	1585*

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.580 DIA.)	VALUE (LBS. ULT.)	686	946	1080	1532



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#10-16/8 ZXL 580 WOODBINDER  
 W/ 12MM ALUMINUM BONDED WASHER; TYPE 17

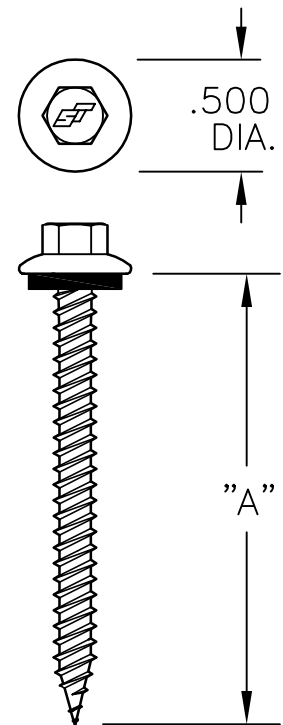
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-34
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG.: P-0092

LENGTH "A": 1"; 1 1/2"; 2", 2 1/2", 3"  
 POINT TYPE: 30° SHARP POINT  
 HEAD DIAMETER: .500  
 MAJOR DIAMETER: .189/.183  
 MINOR DIAMETER: .141/.139



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1135 LBS.  
 MIN. TORSIONAL STRENGTH: 48 IN-LBS.  
 NOM. SHEAR STRENGTH: 1034 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4 PLY	1/2 PLY	7/16 OSB	1x4 Y.P. PRESSURE TREATED	2X Y. PINE		2x SPF
					1" PENETR.	1-1/2" PENETR.	1" PENETR.
VALUE (LBS ULT.)	633	415	390	785	918	1521	685

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	
	THICKNESS	.015	.019	
	BMT (INCHES)	.013	.0175	
NONE (EPDM ONLY)	VALUE (LBS. ULT.)	683	870	

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-16 CHWH TYPE AB  
 304 S/S SELF-TAPPING

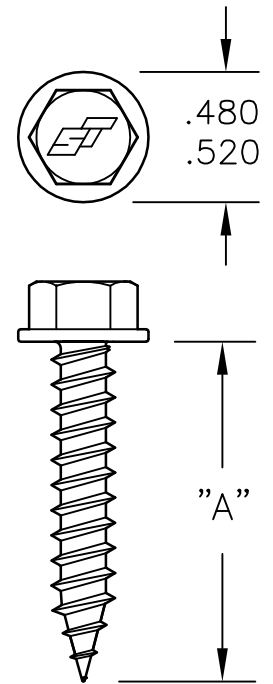
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-35
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. P-0121

LENGTH "A": \* 3/4", 1", 1-1/4", 1-1/2", 1-3/4", 2", 2-1/2", 3", 4", 5", 6"  
 POINT TYPE: 30° GIMLET  
 HEAD (ACROSS FLATS) .367/.375  
 MAJOR DIAMETER: .254/.248  
 MINOR DIAMETER: .185/.178



## STRENGTH CHARACTERISTICS

\* FASTENERS 3" LONG OR LONGER SHALL HAVE A MIN. 3" THREAD LENGTH.

ULT. TENSILE STRENGTH: 4270 LBS.  
 MIN. TORSIONAL STRENGTH: 125 IN-LBS  
 NOM. SHEAR STRENGTH: 2756 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

(1) FULL PENETRATION  
 (2) 1" PENETRATION

MATERIAL:	HRS			3/4	5/8	1/2	7/16	2x	2x	2x	1x
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	Y. PINE	HEM.FIR	SPF	Y. PINE
THICKNESS	.059	.074	.105	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(1)
PREDRILL	#8(.199)	#8(.199)	#8(.199)	—	—	—	—	—	—	—	—
VALUE	800	1250	2017	843	648	378	294	1187	669	651	746

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME				G-90 GALVANIZED	
	NOM. GAUGE	29	26	24	22	20	
	THICKNESS	.015	.019	.024	.032	.038	
	BMT (INCHES)	.013	.0175	.022	.030	.036	
BONDED WASHER (14mm OD)	VALUE (LBS. ULT.)	495	780	1078	1355	1608	
BONDED WASHER (16mm OD)	VALUE (LBS. ULT.)	—	1001	1206	1649	—	

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24, 22, AND 20 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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14-10 HWH (3/8" AF) TYPE A  
 CARBON STEEL; SELF TAPPING

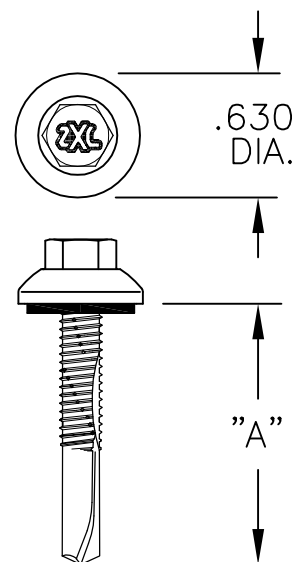
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-36
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

LENGTH "A":	1-1/4"
PT. DIA.	.199/.195
MAJOR DIAMETER	.215/.209
MINOR DIAMETER	.164 REF.
HEAD - ACROSS FLATS	.305/.311

REF. DRWG. P-0178



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS. *
MIN. TORSIONAL STRENGTH:	100 IN-LBS.
NOM. SHEAR STRENGTH:	1999 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			HRS PLATE	
NOM. GAUGE		14	12	3/16"	1/4"
THICKNESS (IN.)		.070	.106	.187	.250
BMT (IN.)		.070	.106	.187	.250
YIELD (KSI)		57	57	50	50
VALUE (LBS. ULT.)		924	1627	2240 LBS. *	

RECOMMENDED TOOL SPEED  
1800-2000 RPM MAXIMUM.

DO NOT USE IMPACTING  
TYPE TOOLS.

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	637	1045	1303	1958



6357 Reynolds Road P.O. Box 4515  
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903-592-2826 1-800-352-4864  
Fax 903-592-1583

#12-24 ZXL HEAVY  
SELF-DRILLING FASTENER

DATE:  
2-21-17

REVISED

REVISION

ENGR. CHG.

No.

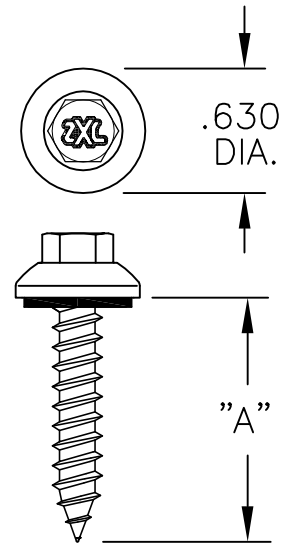
PDST-37

# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0169

LENGTH "A":	1-1/2"
PT. DIA.	30° GIMLET
MAJOR DIAMETER	.254/.248
MINOR DIAMETER	.185/.178
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS.*
MIN. TORSIONAL STRENGTH:	125 IN-LBS
NOM. SHEAR STRENGTH:	2756 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

(1) FULL PENETRATION  
(2) 1" PENETRATION

MAT'L	HRS (PRIMED ONLY)			3/4 PLY	5/8 PLY	1/2 PLY	7/16 OSB	2x Y. PINE	2x HEM.FIR	2x SPF	1x Y. PINE
NOM. GAUGE	16	14	12	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(1)
THICKNESS (IN.)	.065	.070	.106	—	—	—	—	—	—	—	—
PRE-DRILL DIA.	#8(.199)	#8(.199)	#8(.199)	—	—	—	—	—	—	—	—
YIELD (KSI)	57	57	57	—	—	—	—	—	—	—	—
VALUE (LBS. ULT.)	800	1250	2017	843	648	378	294	1187	669	651	746

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL	DESIGNATION	AZ55 GALVALUME			
		PULL OVER VALUES OBTAINED WITHOUT PREDRILL			
	NOM. GAUGE	29	26	24	22
HEAD DIAMETER	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	886	1287	1572	2029



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Fax 903-592-1583

#14-10 TYPE A (5/16 AF)  
ZXL SELF-TAPPING FASTENER

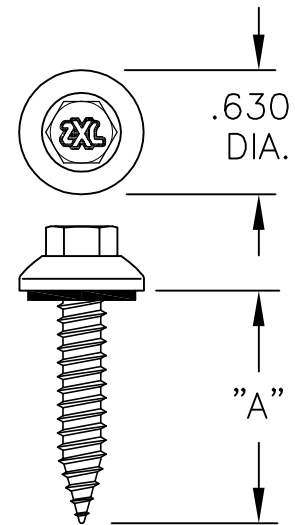
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-38
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

LENGTH "A":	3/4", 1", 1-1/4"
PT. DIA.	GIMLET POINT
MAJOR DIAMETER	.246/.240
MINOR DIAMETER	.192/.185
HEAD - ACROSS FLATS	.305/.311

REF. DRWG. P-0168



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS. *
MIN. TORSIONAL STRENGTH:	150 IN-LBS
NOM. SHEAR STRENGTH:	2808 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18	16	14	12	
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101	
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098	
YIELD (KSI)	57	57	57	50	50	50	50	
PREDRILL DIA.	.199	.199	.199	.156	.199	.199	.199	
VALUE (LBS. ULT.)	1181	1265	2143	1055	1073	1396	1774	

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL          HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME PULL OVER VALUES OBTAINED WITHOUT PREDRILL			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	886	1287	1572	2029



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#1/4-14 ZXL LONG LIFE  
TYPE AB SELF-TAPPING

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-39
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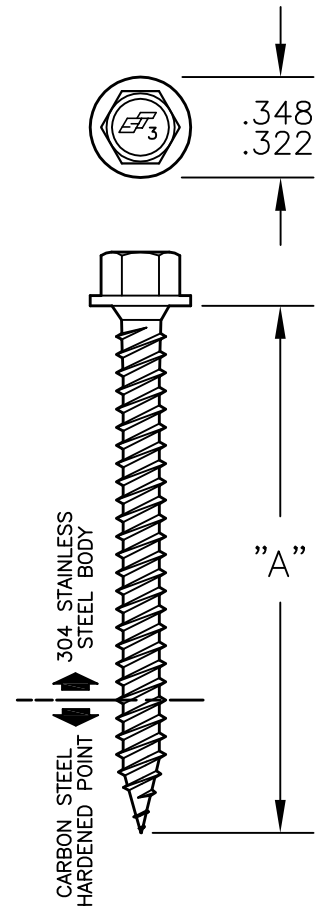


# PERFORMANCE DATA SHEET

REF: DRAWING P-0204

## DIMENSIONAL DATA

LENGTH "A":	1", 1-1/2", 2"
POINT TYPE:	SHARP GIMLET
HEAD (ACROSS FLATS):	.250/.244
MAJOR DIAMETER:	.173/.180
MINOR DIAMETER:	.123/.129



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH :	1875 LBS.
MIN. TORSIONAL STRENGTH:	50 IN-LBS.
NOM. SHEAR STRENGTH:	1210 LBS.

## PULL OUT STRENGTH

SUBSTRATE	3/4" PLY	5/8" PLY	1/2" PLY	7/16" OSB	2X SYP 1" PENETRATION	2X SYP 1-1/2" PENETRATION
VALUE (LBS. ULT.)	725	576	424	246	892	1436

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  WASHER	DESIGNATION	AZ55 GALVALUME	
	NOM. GAUGE	29	26
	THICKNESS	.015	.019
	BMT* (INCHES)	.013	.0175
BONDED WASHER ( 1/2" O.D. STAINLESS )	VALUE (LBS. ULT.)	579	654

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#9-15 WOODBINDER-ACQ  
BI-METAL STAINLESS STEEL

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-40
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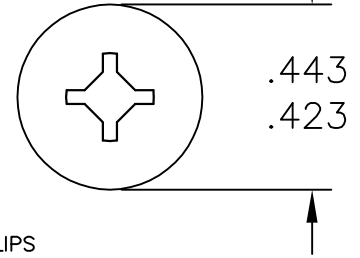
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DRAWING REF. P-0246

## DIMENSIONAL DATA

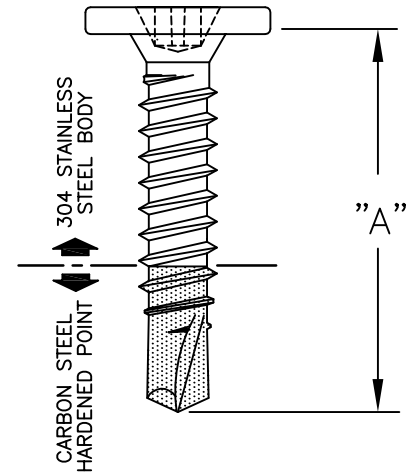
LENGTH "A":	1", 1-1/2"
POINT DIAMETER:	.151/.156
HEAD DIAMETER :	.443/.423
MAJOR DIAMETER:	.189/.183
MINOR DIAMETER:	.135/.141

#2/2  
SQUARE/PHILLIPS  
DRIVE



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH :	1472 LBS
MIN. TORSIONAL STRENGTH:	56 IN-LBS.
NOM. SHEAR STRENGTH:	1358 LBS.



TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L				G-90 GALVANIZED		
NOM. GAUGE	16	14		20	18	
THICKNESS (IN.)	.065	.071		.037	.0475	
BMT (IN.)	.065	.071		.037	.046	
VALUE (LBS ULT.)	1173	1441		399	858	

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

## PULL OVER STRENGTH

MATERIAL    WASHER	TYPE	AZ55 GALVALUME			
	NOM. GA.	29	26	24	22
	NOM. THICKNESS	.015	.019	.024	.032
	BASE METAL (BMT)	.013	.017	.022	.030
	YIELD STRENGTH (KSI)	80	80	50	50
NONE	VALUE (LBS ULT.)	353	959	1302	1632



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#10-16 PANCAKE HD. BI-METAL  
SELF DRILLING; SQ./PHILLIPS RECESS

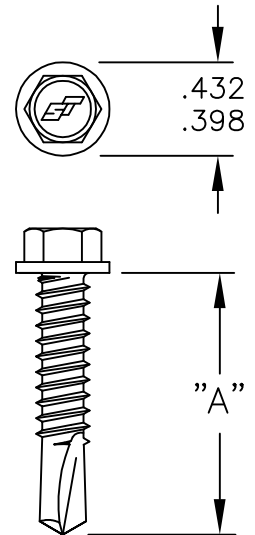
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-41
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0256

LENGTH "A":	1"; 1 1/4"; 1-1/2"; 2"; 3"; 4"; 5"; 6"
PT. DIA.	.210/.216
MAJOR DIAMETER	.246/.240
MINOR DIAMETER	.192/.185
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	3697 LBS.
MIN. TORSIONAL STRENGTH:	150 IN-LBS
NOM. SHEAR STRENGTH:	2912 LBS.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED			
NOM. GAUGE	16	14	12	18	16	14	12
THICKNESS (IN.)	.065	.070	.106	.047	.060	.072	.101
BMT (IN.)	.065	.070	.106	.046	.056	.069	.098
YIELD (KSI)	57	57	57	50	50	50	50
VALUE (LBS. ULT.)	986	1070	2003	807	890	1107	1327

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	26	24	22
	THICKNESS	.019	.024	.032
	BMT (INCHES)	.0175	.022	.030
BONDED WASHER (16mm OD)	VALUE (LBS. ULT.)	925	1135	1443
NONE .398/.432 HWH DIA.	VALUE (LBS. ULT.)	656	832	1114



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#1/4-14 HWH (5/16" AF)  
SELF DRILLING FASTENER (3-POINT)

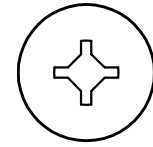
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-42
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRAWING P-0249

LENGTH "A": 1-1/2", 2-1/2"  
 POINT TYPE: 30° GIMLET SHARP POINT  
 HEAD DIAMETER: .450/.430  
 MAJOR DIAMETER: .204/.198  
 MINOR DIAMETER: .128/.122



#2/2  
SQUARE/PHILLIPS  
DRIVE

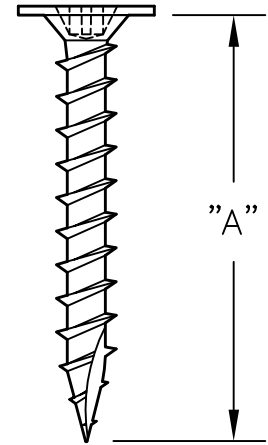
## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1981 LBS.  
 MIN. TORSIONAL STRENGTH: 66 IN-LBS.  
 NOM. SHEAR STRENGTH: 1428 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE  
 USED AS A GUIDE FOR TYPICAL STRENGTH  
 CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE  
 VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE  
 APPLIED BY THE USER TO OBTAIN ALLOWABLE  
 LIMITS FOR DESIGN.



## PULL OUT STRENGTH

SUBSTRATE	1/2 PLY	7/16 OSB	2X Y. PINE 1" PENETR.	2X SPF 1" PENETR.	2X HEM.-FIR 1" PENETR.
VALUE (LBS. ULT.)	478	293	952	665	538

## PULL OVER STRENGTH

MATERIAL  WASHER	DESIGNATION	SLOT-EDGE PANEL
	NOM. GAUGE	29 GA.
	THICKNESS	.0175
	BMT (INCHES)	.014
NONE	VALUE (LBS. ULT.)	685

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF  
 PAINT FINISH AND METALLIC PROTECTIVE COATING.



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 Fax 903-592-1583

#10-9 WAFER HEAD TYPE A  
 SQUARE/PHILLIPS DRIVE

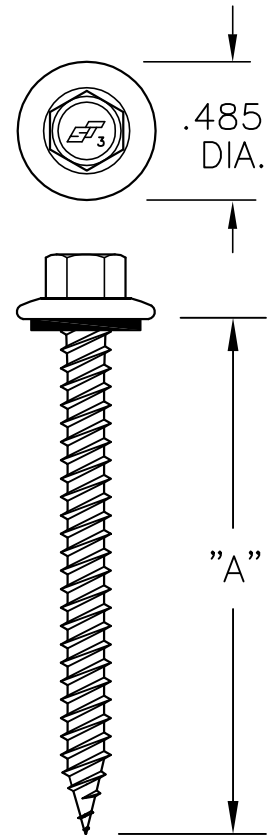
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-43
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF: DRAWING P-0302

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"  
 POINT DIAMETER: SHARP POINT  
 HEX ACROSS FLATS: .250/.244  
 MAJOR DIAMETER: .181/.175  
 MINOR DIAMETER: .133/.127



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 2768 lbf  
 MIN. TORSIONAL STRENGTH: 80 lbf-in  
 NOM. SHEAR STRENGTH: 1918 lbf

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4 PLY	1/2 PLY	7/16 OSB	2X SYP 1" PENETRATION	2X SYP 1-1/2' PENETRATION
VALUE (LBS ULT.)	667	395	239	892	1436

## PULL OVER STRENGTH

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	24
	THICKNESS	.015	.019	.024
	BMT (INCHES)	.013	.0175	.0215
NONE (EPDM ONLY)	VALUE (LBS. ULT.)	678	863	898

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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 Fax 903-592-1583

#9 CHWH TWIN LEAD SHARP  
 POINT, SPECIAL 304 HARDENED

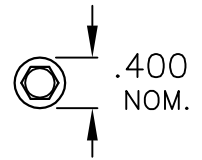
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-44
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. P-0314

LENGTH :	3-3/4"
POINT TYPE:	SELF-DRILL
HEAD (ACROSS FLATS)	.250 NOM.
MAJOR DIAMETER:	.215 NOM.
MINOR DIAMETER:	.130 NOM.



## STRENGTH CHARACTERISTICS

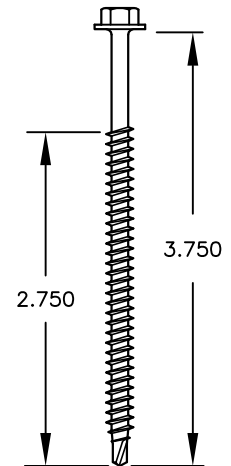
ULT. TENSILE STRENGTH:	2154 lbf *
MIN. TORSIONAL STRENGTH:	125 lbf-in
NOM. SHEAR STRENGTH:	2756 lbf

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

\* TENSILE STRENGTH SHOWN REPRESENTS ULTIMATE TENSILE STRENGTH IN THE THREAD AREA.



## PULL OUT STRENGTH

(1) FULL PENETRATION  
(2) 1" PENETRATION

MATERIAL:	GALVANIZED STEEL					3/4	5/8	1/2	7/16	2x	2x
NOM. GA.	18	20	22	24	26	PLY	PLY	PLY	OSB	Y. PINE	Y. PINE
THICKNESS	.047	.038	.031	.024	.019	(1)	(1)	(1)	(1)	(1)	(2)
BMT (INCHES)	.046	.036	.0285	.0215	.0175	n/a	n/a	n/a	n/a	n/a	n/a
VALUE	653	489	406	319	263	795	564	457	177	1605	976

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

## PULL OVER STRENGTH

MATERIAL  HEAD DIAMETER	DESIGNATION		
	NOM. GAUGE	29	26
	THICKNESS	.015	.019
	BMT (INCHES)	.013	.0175
BONDED WASHER (14mm OD)	VALUE (LBS. ULT.)	671	845

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24, 22, 20 AND 18 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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No. 12-13 HWH SELF-DRILLING  
ELECTRO-COATED DECKING FASTENER

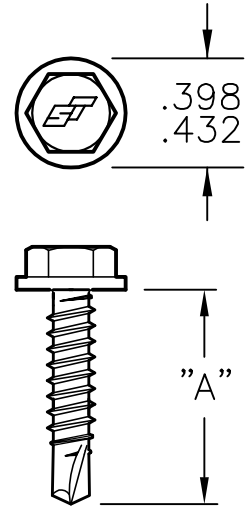
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-45
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0119

LENGTH "A": 5/8"; 3/4"; 1"; 1 1/4"; 1 1/2"	
PT. DIA.	.151/.156
MAJOR DIAMETER	.183/.189
MINOR DIAMETER	.135/.141
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	1920
MIN. TORSIONAL STRENGTH:	61 IN-LBS
NOM. SHEAR STRENGTH:	1633 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED		AZ55 GALVALUME		
NOM. GAUGE	16	14	12	18	20	22	24	26
THICKNESS (IN.)	.065	.070	.106	.047	.038	.032	.024	.019
BMT (IN.)	.065	.070	.106	.046	.036	.030	.022	.0175
YIELD (KSI)	57	57	57	50	50	50	50	50
VALUE (LBS. ULT.)	830	1006	1495	664	306	260	210	158

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD CONFIGURATION	DESIGNATION	AZ55 GALVALUME			G-90 GALVANIZED
	NOM. GAUGE	26	24	22	20
	THICKNESS	.019	.024	.032	.038
	BMT (INCHES)	.0175	.022	.030	.036
BONDED WASHER (12mm OD)	VALUE (LBS. ULT.)	688	944	1314	1473



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Tyler, Texas 75712  
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#10-16 HWH (5/16" AF)  
SELF DRILLING FASTENER

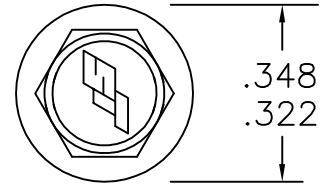
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-46
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# PERFORMANCE DATA SHEET

REF. DRWG. P-0125

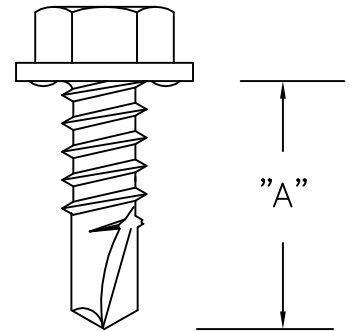
## DIMENSIONAL DATA

LENGTH "A": 1/2"; 5/8"  
 POINT DIAMETER: .136/.131  
 MAJOR DIAMETER: .166/.161  
 MINOR DIAMETER: .122/.116



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1844 LBS.  
 MIN. TORSIONAL STRENGTH: 42 IN-LBS.  
 NOM. SHEAR STRENGTH: 1138 LBS.



## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED		
NOM. GAUGE	16	14	12	18		
THICKNESS (IN.)	.065	.070	.106	.047		
BMT (IN.)	.065	.070	.106	.046		
VALUE (LBS. ULT.)	860	984	1636	604		

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	24
	THICKNESS	.015	.019	.024
	BMT (INCHES)	.013	.0175	.022
NONE (.322 HEAD DIAMETER)	VALUE (LBS. ULT.)	421	636	854

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUE FOR 24 GA. WAS OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



6357 Reynolds Road P.O. Box 4515  
 Tyler, Texas 75712  
 903-592-2826 1-800-352-4864  
 Fax 903-592-1583

#8-18 HWH w/ 6 NIBS  
 SELF-DRILLING FASTENER

DATE:  
2-21-17

REVISED

REVISION

ENGR. CHG.

No.

PDST-47

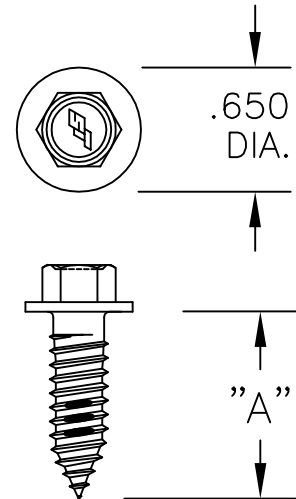


# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0128

LENGTH "A":	1"
PT. DIA.	GIMLET
MAJOR DIAMETER	.361/.370
MINOR DIAMETER	.282 NOM.
HEAD - ACROSS FLATS	.420/.431



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	7525 LBS.
MIN. TORSIONAL STRENGTH:	500 IN-LBS
NOM. SHEAR STRENGTH:	5950 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MAT'L	HRS (PRIMED ONLY)			G-90 GALVANIZED				
NOM. GAUGE	16	14	12	18				
THICKNESS (IN.)	.065	.070	.106	.047				
PRE-DRILL DIA.	9/32"	9/32"	9/32"	9/32"				
YIELD (KSI)	57	57	57	50				
VALUE (LBS. ULT.)	1595	1736	2405	945				

## PULL OVER STRENGTH

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	26	24	22	
	THICKNESS	.019	.024	.032	
	BMT (INCHES)	.0175	.022	.030	
	VALUE (LBS. ULT.)	811	990	1373	

NOTE: PULL OVER VALUES OBTAINED USING 3/8" X 18.3MM EPDM BONDED WASHER  
 BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.  
 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING.  
 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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 Fax 903-592-1583

3/8-12 TRI-LOBULAR 7/16" HWH  
 TYPE AB SELF-TAPPING

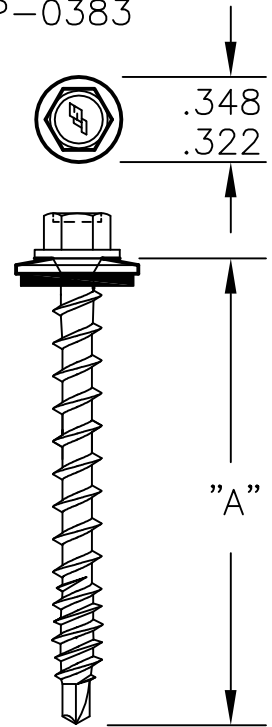
DATE: 2-21-17	REVISED	ENGR. CHG.	No. PDST-48
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# PERFORMANCE DATA SHEET

REF. DRWG. P-0383

## DIMENSIONAL DATA

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"	
PT. DIA.	SELF DRILL POINT
MAJOR DIAMETER	.205/.191
MINOR DIAMETER	.121/.116
HEAD - ACROSS FLATS	NOMINAL 0.25"



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	1904 LBS.
MIN. TORSIONAL STRENGTH:	56 IN-LBS.
NOM. SHEAR STRENGTH:	1547 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE		2x SPF		2X OAK
	PLY	PLY	PLY	OSB	1" PENET.	1-1/2" PENET.	1" PENET.	1-1/2" PENET.	1" PENET.
VALUE (LBS ULT.)	636	441	368	210	713	1526	466	1216	1114

TBD - FULL PENETRATION VALUES TO BE DETERMINED

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUES SHOWN FOR 24 GA WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	24
	THICKNESS	.015	.019	.024
	BMT (INCHES)	.013	.0175	.022
BONDED WASHER (12mm O.D.)	VALUE (LBS. ULT.)	378	629	721

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-16/8 HWH KWIKSEAL  
WOODBINDER; MB POINT

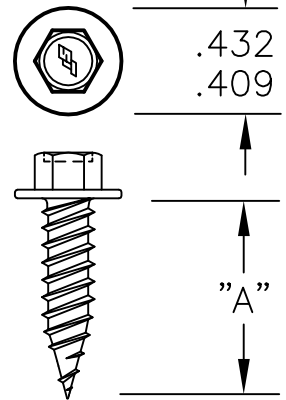
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-49
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# PERFORMANCE DATA SHEET

REF. DRWG. P-0117

## DIMENSIONAL DATA

LENGTH "A": 3/4"	
PT. DIA.	SELF DRILL POINT
MAJOR DIAMETER	.209/.215
MINOR DIAMETER	.153/.160
HEAD — ACROSS FLATS	NOMINAL 0.25"



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2900 LBS.
MIN. TORSIONAL STRENGTH:	88 IN-LBS.
NOM. SHEAR STRENGTH:	1962 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE
	PLY	PLY	PLY	OSB	3/4" PENETRATION
VALUE (LBS ULT.)	573	297	349	206	399

TBD — PULLOUT VALUES TO BE DETERMINED

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUES SHOWN FOR 24 GA WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	24
	THICKNESS	.015	.019	.024
	BMT (INCHES)	.013	.0175	.022
BONDED WASHER (14.3mm O.D.)	VALUE (LBS. ULT.)	687	1090	1299

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#12-14 TWIN LEAD SHARP  
POINT; LARGE WASHER; HIGH HWH

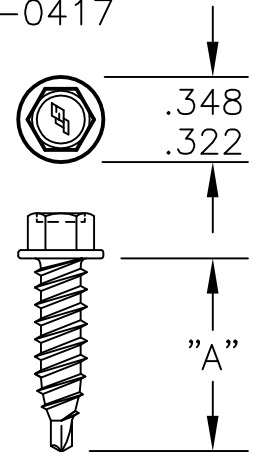
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-50
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# PERFORMANCE DATA SHEET

REF. DRWG. P-0417

## DIMENSIONAL DATA

LENGTH "A":	3/4"	
PT. DIA.		SELF DRILL POINT
MAJOR DIAMETER		.209/.215
MINOR DIAMETER		.153/.160
HEAD - ACROSS FLATS		NOMINAL 0.25"



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2900 LBS.
MIN. TORSIONAL STRENGTH:	88 IN-LBS.
NOM. SHEAR STRENGTH:	1962 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

DUE TO CHANGES IN MANUFACTURING PROCEDURES USED BY LUMBER MILLS, INCLUDING LUMBER DENSITIES, FILLER MATERIAL, ADHESIVES, PLY QUANTITY AND THICKNESS, ETC. PULLOUT STRENGTHS HAVE BEEN UPDATED TO REFLECT THE VALUES USING MATERIAL AVAILABLE ON 4/21/15.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE
	PLY	PLY	PLY	OSB	3/4" PENETRATION
VALUE (LBS. ULT.)	TBD	369	301	218	495

TBD - PULLOUT VALUES TO BE DETERMINED

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. VALUES SHOWN FOR 24 GA WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	24
	THICKNESS	.015	.019	.024
	BMT (INCHES)	.013	.0175	.022
BONDED WASHER (12mm O.D.)	VALUE (LBS. ULT.)	378	629	721

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#12-14, TWIN LEAD, HIGH HWH  
KWIKSEAL FLANGE, MB POINT

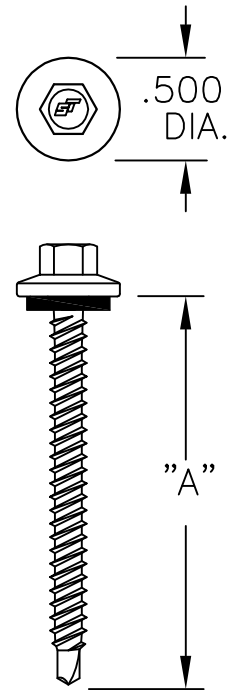
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-51
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF: DRAWING P-0436

LENGTH "A":	1"; 1 1/2"; 2"; 2 1/2"; 3"
POINT DIAMETER:	.105/.110
HEX ACROSS FLATS:	.250/.244
MAJOR DIAMETER:	.181/.175
MINOR DIAMETER:	.133/.127



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2100 POUNDS
MIN. TORSIONAL STRENGTH:	48 IN-LBS
NOM. SHEAR STRENGTH:	1800 POUNDS

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4 PLY	1/2 PLY	7/16 OSB	2X SYP 1" PENETRATION	2X SYP 1-1/2' PENETRATION
VALUE (LBS ULT.)	668	242	224	852	1030

## PULL OVER STRENGTH

.500 DIA. STAINLESS STEEL CAP W/ EPDM WASHER	ALLOY DESIGNATION	AZ55 GALVALUME	ALUMINUM
	THICKNESS	0.019	.028
	BMT	0.017	.028
	YIELD STRENGTH (KSI)	60	--
EPDM (UNDER CHWH)	VALUE (LBS ULT.)	726	380

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#9-15 CHWH (1/4 AF) STAINLESS  
STEEL CAP TWIN LEAD, MB PT

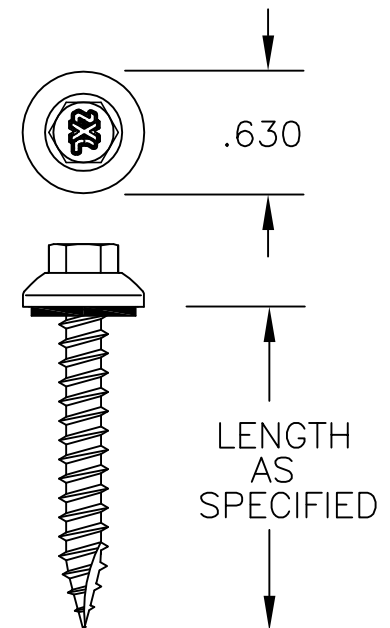
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-53
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0340

LENGTH "A":	LENGTH AS SPECIFIED
PT. DIA.	TYPE 17 GIMLET
MAJOR DIAMETER	.254/.248
MINOR DIAMETER	.185/.178
HEAD - ACROSS FLATS	NOM. 0.3125



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	2240 LBS.*
MIN. TORSIONAL STRENGTH:	125 IN-LBS
NOM. SHEAR STRENGTH:	2756 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

(1) THROUGH PENETRATION  
(2) 1" PENETRATION

MATERIAL:	HRS			3/4	5/8	1/2	7/16	2x	2x	2x	1x
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	Y. PINE	HEM.FIR	SPF	Y. PINE
THICKNESS	.059	.074	.105	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(1)
VALUE	800	1250	2017	843	648	378	294	1187	669	651	746

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.630 DIA.)	VALUE (LBS. ULT.)	813	1439	1601	2037



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#14-10 TYPE A T-17 30°  
30° GIMLET POINT 0.630 ZXL

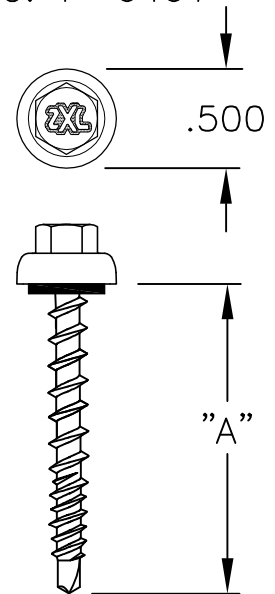
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-54
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF. DRWG. P-0401

LENGTH "A":	1"; 1 1/2"; 2"; 2 1/2"; 3"
PT. DIA.	SELF-DRILL POINT MICROBIT
MAJOR DIAMETER	.210/.200
MINOR DIAMETER	.130/.126
HEAD - ACROSS FLATS	.305/.311



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:	1585 LBS.*
MIN. TORSIONAL STRENGTH:	60 IN-LBS.
NOM. SHEAR STRENGTH:	1574 LBS.

\* THE TABULATED VALUE REPRESENTS THE ULTIMATE TENSILE LOAD AT WHICH THE ZXL HEAD BREAKS FROM THE CARBON STEEL FASTENER BODY.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE		2x SPF		2X OAK
	PLY	PLY	PLY	OSB	1" PENET.	1-1/2" PENET.	1" PENET.	1-1/2" PENET.	1" PENET.
VALUE (LBS. ULT.)	636	441	368	210	713	1526	466	1216	1114

## PULL OVER STRENGTH

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING. 24 AND 22 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
ZXL (.500 DIA.)	VALUE (LBS. ULT.)	658	927	1035	1386



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#10-16/8 ZXL KWIKSEAL  
LONG LIFE WOODBINDER; MB PT

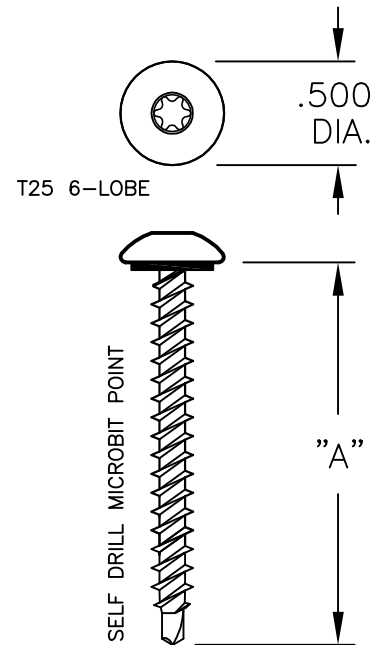
DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-55
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# PERFORMANCE DATA SHEET

REF DRWG.: P-0490

## DIMENSIONAL DATA

LENGTH "A": 1"; 1 1/2"; 2"; 2 1/2"; 3"  
 POINT DIAMETER: SELF-DRILL POINT MICROBIT  
 MAJOR DIAMETER: .206/.200  
 MINOR DIAMETER: .126/.122  
 HEAD DIAMETER: .500



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 2023 LBS.  
 MIN. TORSIONAL STRENGTH: 75 IN-LBS.  
 NOM. SHEAR STRENGTH: 1653 LBS.

## PULL OUT STRENGTH

SUBSTRATE	3/4	5/8	1/2	7/16	2X Y. PINE		2x SPF		2X OAK
	PLY	PLY	PLY	OSB	1" PENET.	1-1/2" PENET.	1" PENET.	1-1/2" PENET.	1" PENET.
VALUE (LBS ULT.)	454	382	397	169	766	1619	606	1105	1412

ALL PULL OUT VALUES USED FULL PENETRATION OR AS NOTED  
 1-1/2" PENETRATION IS THROUGH A NOMINAL 2X THICK BOARD

## PULL OVER STRENGTH

MATERIAL  WASHER / HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME		
	NOM. GAUGE	29	26	
	THICKNESS	.015	.019	
	BMT (INCHES)	.013	.0175	
NONE (EPDM ONLY)	VALUE (LBS. ULT.)	688	879	

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-11 TRUSS HEAD ECLIPSE  
 WOODBINDER MB POINT

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-56
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. P-0261

LENGTH "A": 2" & 2-1/2"

POINT TYPE:

HEAD (ACROSS FLATS)

MAJOR DIAMETER:

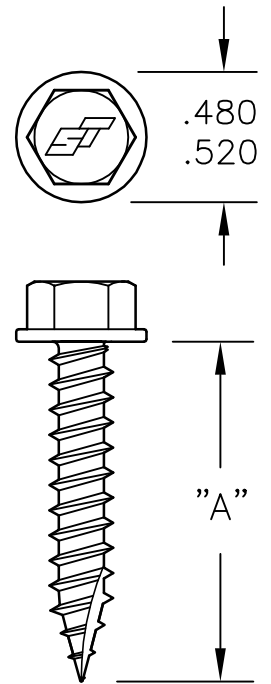
MINOR DIAMETER:

TYPE 17 GIMLET

.367/.375

.254/.248

.185/.178



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:

4270 LBS.

MIN. TORSIONAL STRENGTH:

125 IN-LBS

NOM. SHEAR STRENGTH:

2756 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

(1) THROUGH PENETRATION

(2) 1" PENETRATION

MATERIAL:	HRS			3/4	5/8	1/2	7/16	2x	2x	2x	1x
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	Y. PINE	HEM.FIR	SPF	Y. PINE
THICKNESS	.059	.074	.105	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(1)
PREDRILL	#8(.199)	#8(.199)	#8(.199)	—	—	—	—	—	—	—	—
VALUE	800	1250	2017	843	648	378	294	1187	669	651	746

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME				G-90 GALVANIZED	
	NOM. GAUGE	29	26	24	22	20	
	THICKNESS	.015	.019	.024	.032	.038	
	BMT (INCHES)	.013	.0175	.022	.030	.036	
NONE (.398/.432 HWH DIA.)	VALUE (LBS. ULT.)	—	722	1040	1197	1419	
BONDED WASHER (14mm OD)	VALUE (LBS. ULT.)	495	780	1078	1355	1608	
BONDED WASHER (16mm OD)	VALUE (LBS. ULT.)	—	1001	1206	1649	—	

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING.  
24, 22, AND 20 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



6357 Reynolds Road P.O. Box 4515  
Tyler, Texas 75712  
903-592-2826 1-800-352-4864  
Fax 903-592-1583

14-10 HWH (3/8" AF) TYPE A  
SELF TAPPING W/ TYPE 17 POINT

DATE: 2-21-17	REVISED	REVISION	ENGR. CHG.	No. PDST-57
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. P-0367

LENGTH "A": 1-1/2", 2" & 2-1/2"

POINT TYPE:

HEAD (ACROSS FLATS)

MAJOR DIAMETER:

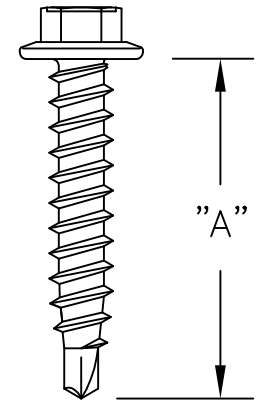
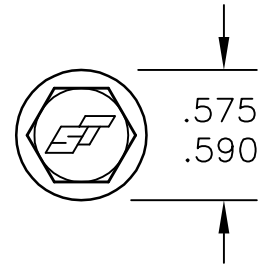
MINOR DIAMETER:

TYPE SD POINT

.305/.311

.254/.248

.185/.178



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:

TBD LBS.

MIN. TORSIONAL STRENGTH:

125 IN-LBS

NOM. SHEAR STRENGTH:

TBD LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

(1) THROUGH PENETRATION

(2) 1" PENETRATION

MATERIAL:	HRS			3/4	5/8	1/2	7/16	2x	2x	2x	1x
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	Y. PINE	HEM.FIR	SPF	Y. PINE
THICKNESS	.059	.074	.105	(1)	(1)	(1)	(1)	(2)	(2)	(2)	(1)
PREDRILL	#8(.199)	#8(.199)	#8(.199)								
VALUE											

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME				G-90 GALVANIZED	
	NOM. GAUGE	29	26	24	22	20	
	THICKNESS	.015	.019	.024	.032	.038	
	BMT (INCHES)	.013	.0175	.022	.030	.036	
NONE (.575/.590 CHWH DIA.)	VALUE (LBS. ULT.)						

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING.  
24, 22, AND 20 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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14-10 HWH (5/16" AF) (410 STAINLESS)  
SELF TAPPING W/ TYPE SD POINT

DATE:  
2-21-17

REVISED

REVISION

ENGR. CHG.

No.

PDST-58

# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. N/A

LENGTH "A": 1-1/2"

POINT TYPE:

HEAD (ACROSS FLATS)

MAJOR DIAMETER:

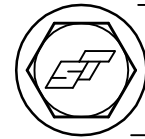
MINOR DIAMETER:

TYPE SD POINT

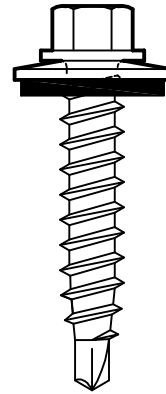
.310/.317 (8mm)

.215/.222 (5.5mm)

.155/.160 (4 mm)



.413  
.420



"A"

## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH:

878 LBS.

MIN. TORSIONAL STRENGTH:

36 IN-LBS

NOM. SHEAR STRENGTH:

851 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MATERIAL:	HRS			3/4	5/8	1/2	7/16	2x	2x	2x	1x
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	Y. PINE	HEM.FIR	SPF	Y. PINE
THICKNESS	.059	.074	.105								
PREDRILL											
VALUE					505						

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME				G-90 GALVANIZED	
	NOM. GAUGE	29	26	24	22	20	
	THICKNESS	.015	.019	.024	.032	.038	
	BMT (INCHES)	.013	.0175	.022	.030	.036	
NONE (.575/.590 CHWH DIA.)	VALUE (LBS. ULT.)						



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5.5 mm X 35 mm HWH (5/16" AF)  
ALUMINUM FARMER SCREWS (SD POINT)

DATE:  
2-21-17

REVISED

REVISION

ENGR. CHG.

No.

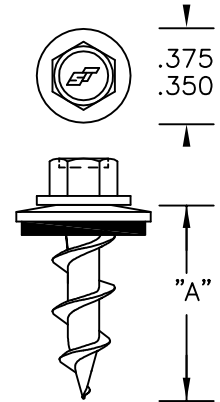
PDST-59

# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. P-0339

LENGTH "A": 3/4" & 1"  
POINT TYPE: 30° SHARP POINT  
HEAD (ACROSS FLATS) .250 NOMINAL  
MAJOR DIAMETER: .245/.252  
MINOR DIAMETER: .125/.132



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 1850 LBS.  
MIN. TORSIONAL STRENGTH: 86 IN-LBS  
NOM. SHEAR STRENGTH: 2050 LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MATERIAL:	HRS			3/4	5/8	1/2	7/16	2x	2x	
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	Y. PINE	SPF	TBD
THICKNESS (IN)	.059	.074	.105	(1)	(1)	(1)	(1)	(2)	(2)	
VALUE (LBS)				606	437	342	192	875	520	

(1) THROUGH PENETRATION  
(2) 1" PENETRATION

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  WASHER DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS (IN)	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
0.475	VALUE (LBS. ULT.)	378	629	721	

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING.  
24, 22, AND 20 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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#14-5 HWH (1/4"AF) SINGLE LEAD  
SHARP POINT (BUTTRESS THREAD)

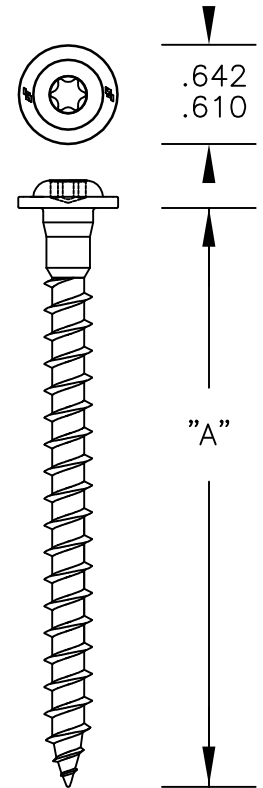
DATE: 12-8-16	REVISED	REVISION	ENGR. CHG.	No. PDS-60
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

DRAWING REF. P-0338

LENGTH "A": 3-1/2"  
POINT TYPE: 30° SHARP POINT  
HEAD (TORX) : T-30  
MAJOR DIAMETER: .294/.300  
MINOR DIAMETER: .194/.200



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: LBS.  
MIN. TORSIONAL STRENGTH: IN-LBS  
NOM. SHEAR STRENGTH: LBS.

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

MATERIAL:	HRS			3/4	5/8	1/2	7/16	2x	2x	2x	1x
NOM. GA.	16	14	12	PLY	PLY	PLY	OSB	Y. PINE	HEM.FIR	SPF	Y. PINE
THICKNESS	.059	.074	.105								
PREDRILL											
VALUE											

## PULL OVER STRENGTH

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.

MATERIAL  DOVE HEAD DIAMETER	DESIGNATION	AZ55 GALVALUME			
	NOM. GAUGE	29	26	24	22
	THICKNESS	.015	.019	.024	.032
	BMT (INCHES)	.013	.0175	.022	.030
0.610 / 0.642	VALUE (LBS. ULT.)				

NOTE: 26 AND 29 GA. VALUES SHOWN WERE OBTAINED USING 80 KSI STEEL SHEETING.  
24, 22, AND 20 GA. VALUES WERE OBTAINED USING 50 KSI MINIMUM STEEL SHEETING.



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5/16" TORX WASHER HEAD  
30° SHARP POINT (3/8" SHOULDER)

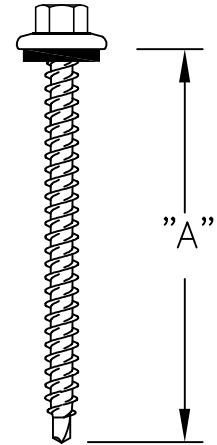
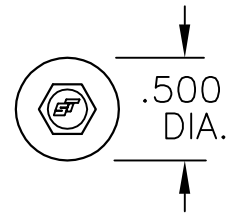
DATE: 12-8-16	REVISED	REVISION	ENGR. CHG.	No. PDST-61
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# PERFORMANCE DATA SHEET

## DIMENSIONAL DATA

REF: DRAWING P-0432

LENGTH "A": 1", 1 1/2", 2", 2 1/2", 3"  
 POINT DIAMETER: .105/.110  
 HEX ACROSS FLATS: Nom. .250  
 MAJOR DIAMETER: .189/.183  
 MINOR DIAMETER: .122/.127



## STRENGTH CHARACTERISTICS

ULT. TENSILE STRENGTH: 2050 POUNDS  
 MIN. TORSIONAL STRENGTH: 56 IN-LBS  
 NOM. SHEAR STRENGTH: 1800 POUNDS

TECHNICAL DATA PROVIDED HEREIN IS TO BE USED AS A GUIDE FOR TYPICAL STRENGTH CHARACTERISTICS ONLY.

ALL STRENGTH VALUES SHOWN ARE ULTIMATE VALUES, EXPRESSED IN POUNDS.

AN APPROPRIATE FACTOR OF SAFETY MUST BE APPLIED BY THE USER TO OBTAIN ALLOWABLE LIMITS FOR DESIGN.

## PULL OUT STRENGTH

SUBSTRATE	3/4 PLY	1/2 PLY	7/16 OSB	2X SYP 1" PENETRATION	2X SYP 1-1/2' PENETRATION
VALUE (LBS ULT.)	614	276	188	710	1323

## PULL OVER STRENGTH

.500 DIA. STAINLESS STEEL CHWH W/ EPDM WASHER	ALLOY DESIGNATION	AZ55 GALVALUME	ALUMINUM
	THICKNESS	0.019	.028
	BMT	0.017	.028
	YIELD STRENGTH (KSI)	80	--
EPDM (UNDER CHWH)	VALUE (LBS ULT.)	726	380

BMT DENOTES BASE METAL THICKNESS AFTER REMOVAL OF PAINT FINISH AND METALLIC PROTECTIVE COATING.



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#10-15 CHWH (1/4 AF) HARDENED  
 STAINLESS STEEL, TWIN LD, MB PT

DATE: 1-4-17	REVISED	REVISION	ENGR. CHG.	No. PDST-62
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