

#14 SIP FASTENERS

FOR STRUCTURAL INSULATED PANEL, NAILBOARD AND PLYWOOD ATTACHMENT



PRODUCT FEATURES

- Case-hardened and tempered for easy installation and long-term durability
- Large diameter, low profile pancake head provides excellent pull-through resistance without the need for a washer while eliminating "telegraphing" on shingles, metal panels, and other roof surface materials
- 6-lobe internal drive offers excellent bit engagement during installation, especially in high torque applications
- Widest selection of fastener lengths in the industry for proper sizing to panel thickness
- Choice of 3 thread/point styles for job-matched performance in wood, steel, or concrete/CMU substrates

CODE APPROVALS & LISTINGS



FM Global
CE European Technical
Approval ETA 19/0616



Miami-Dade County
State of Florida
FL# 4500-R4



DrJ Certification
Technical Evaluation Report
TER 1909-04

MATERIAL SPECIFICATIONS

Material: Case-hardened & tempered carbon steel
Coating: TRU-KOTE™ Epoxy E-coat (black)

Manufacturing Location: Bryan, OH USA
LEED® Eligible Recycled Content: 20%



SIPTP
Thread Point for Wood, Timber,
and Concrete/CMU Applications



SIPLD
Light-Duty Drill Point for
Corrugated Steel Deck, Wood,
& Concrete/CMU Applications



SIPHD
Heavy-Duty Drill Point for Thick
Steel Member Applications



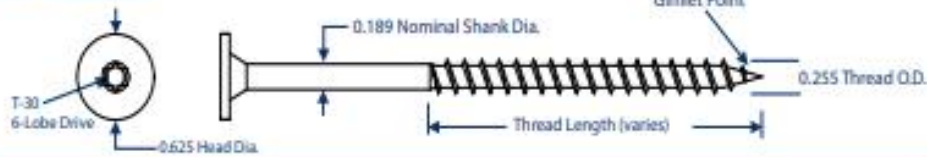
To find a distributor call 855-800-8878 or visit www.directmetalsinc.com

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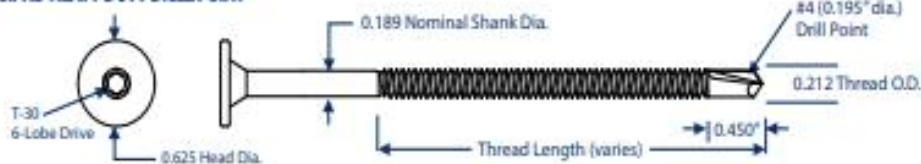
SIPTP THREAD POINT



SIPLD LIGHT DUTY DRILL POINT



SIPHD HEAVY DUTY DRILL POINT



PRODUCT SELECTION (SIPTP & SIPLD)

Length	SIPTP Part #	SIPLD Part #	Pkg. Qty.
2 (51)	SIPTP-2000	NA	500/PAIL
2-1/2 (64)	SIPTP-2500	NA	500/PAIL
3 (76)	SIPTP-3000	SIPLD-3000	500/PAIL
3-1/2 (89)	SIPTP-3500	SIPLD-3500	500/PAIL
4 (102)	SIPTP-4000	SIPLD-4000	500/PAIL
4-1/2 (114)	SIPTP-4500	SIPLD-4500	500/PAIL
5 (140)	SIPTP-5000	SIPLD-5000	500/PAIL
5-1/2 (140)	SIPTP-5500	SIPLD-5500	500/PAIL
6 (152)	SIPTP-6000	SIPLD-6000	500/PAIL
6-1/2 (165)	SIPTP-6500	SIPLD-6500	500/PAIL
7 (178)	SIPTP-7000	SIPLD-7000	500/PAIL
7-1/2 (191)	SIPTP-7500	SIPLD-7500	500/PAIL
8 (203)	SIPTP-8000	SIPLD-8000	500/PAIL
8-1/2 (216)	SIPTP-8500	SIPLD-8500	250/PAIL
9 (229)	SIPTP-9000	SIPLD-9000	250/PAIL
10 (254)	SIPTP-10000	SIPLD-10000	250/PAIL
11 (279)	SIPTP-11000	SIPLD-11000	250/PAIL
12 (305)	SIPTP-12000	SIPLD-12000	250/PAIL
13 (330)	SIPTP-13000	SIPLD-13000	250/BOX
14 (356)	SIPTP-14000	SIPLD-14000	250/BOX
15 (381)	SIPTP-15000	SIPLD-15000	250/BOX
16 (406)	SIPTP-16000	SIPLD-16000	250/BOX
18 (483)	SIPTP-18000	SIPLD-18000	250/BOX

PRODUCT SELECTION (SIPHD)

Length	SIPHD Part #	Pkg. Qty.
6 (152)	SIPHD-6000	500/PAIL
8 (203)	SIPHD-8000	250/PAIL
9-3/4 (248)	SIPHD-9750	250/PAIL
11-3/4 (298)	SIPHD-11750	250/PAIL
13-3/4 (349)	SIPHD-13750	250/BOX

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PERFORMANCE DATA

NOTE: All values provided are average ultimate values. As determined by the project architect/engineer, appropriate safety factors must be used in design. For additional engineering performance values, please refer to DrJ TER No. 1909-04 available at <https://www.drjengineering.org/>.

Fastener Properties						
Fastener	Property				Avg. Ult. Pull-Thru Values (lbs) ASTM D1761	
	Tensile (lbs) AISI S904	Shear (lbs) AISI S904	Bending Yield Strength - Fyb (psi) ASTM F1575	Corrosion Resistance ASTM D6294, ETAG 006	7/16" OSB	SIP Panel (7/16" OSB)
SIPTP	3555	2580	185,000	<15% Red Rust after 30 cycles	490	630
SIPLD	3390	2490				
SIPHD	3855	2625				

SIPLD Pullout Values in Steel Deck (lbs)*							
Corrugated Steel Deck	24 ga.	22 ga.		20 ga.	18 ga.	16 ga.	
Yield Strength	36 ksi	36 ksi	85 ksi	36 ksi	36 ksi	36 ksi	100 ksi
SIPLD	250	381	435	449	694	896	1186

*Minimum 3/4" penetration of fastener through deck as measured from underside of deck

SIPHD Pullout Values in Structural Steel (lbs)*						
Structural Steel	16 ga.		12 ga.	1/8"	3/16"	1/4"
Yield Strength	36 ksi	100 ksi	50 ksi	36 ksi	60 ksi	60 ksi
SIPHD	491	794	1255	1454	3098	3814

*Minimum (3) threads of penetration of fastener through deck as measured from underside of steel

Withdrawal Values in Lumber & Engineered Wood, Face Grain (lbs/in.)*				
Wood Type (Specific Gravity)	SPF/HF (0.42)	DF/SP (0.50)	LVL (0.50)	LSL (0.50)
SIPTP	779	899	556	711
SIPLD	662	732	540	646

*Load values include fastener tip

Withdrawal Values in Lumber & Engineered Wood, Edge Grain (lbs/in.)*			
Wood Type (Specific Gravity)	SPF/HF (0.42)	DF/SP (0.50)	LVL (0.50)
SIPTP	615	702	495
SIPLD	497	720	469

*Load values include fastener tip

Withdrawal Values in Engineered Wood Substrates (lbs)*							
Wood Type (Specific Gravity)	OSB				Plywood		
Thickness	7/16"	1/2"	19/32"	23/32"	15/32"	19/32"	23/32"
SIPTP	265	244	324	626	333	529	681
SIPLD	284	261	334	693	344	519	720

*Fastener penetrates through the full thickness of board

Tension Values in Normal Weight Concrete & CMU (lbs) ¹			
Compression Strength	2500 psi Concrete	5000 psi Concrete	CMU ²
SIPTP	682	859	713
SIPLD	476	648	553

1. Fastener penetrates 1" into the concrete or CMU block, including the tip
2. Concrete masonry unit (CMU) conforming to ASTM C90

Lateral Load Resistance (lbs)			
Fastener	Main Member	Side Member	Load
SIPTP	SPF ¹	8-1/4" SIP Panel	943
SIPLD	22 ga. Corrugated Steel Deck ²	7-1/4" Nailbase Panel	411
SIPLD	7/16" OSB ³	7-1/4" Nailbase Panel	112
SIPHD	1/8" Structural Steel ⁴	8-1/4" SIP Panel	929

1. 1-3/4" fastener embedment into edge grain, including tip
2. Minimum 3/4" penetration of fastener through deck as measured from underside of deck
3. Fastener penetrates through the full thickness of board
4. Minimum (3) threads of penetration through steel as measured from underside of steel

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#14 SIP FASTENERS



INSTALLATION GUIDELINES

Fasteners are intended to mechanically attach structural insulated panels or composite insulation boards to various substrates.

- **SIPLD (Light Duty)** are for installation into wood, light gauge steel framing (22 – 18 ga.), corrugated steel decking (22 – 18 ga.), concrete or CMU. For installation into concrete or CMU, predrill with 3/16 in. masonry bit. Install using a maximum 2,500 rpm screw gun.
- **SIPTP (Thread Point)** are for installation into wood, concrete or CMU. For installation into concrete or CMU, predrill with 3/16 in. masonry bit. Install using a low rpm/high torque screw gun.
- **SIPHD (Heavy Duty)** are for installation to 16 ga. to 3/8 in. steel members. For installation into steel over 3/8 in. thickness, predrill with a #8 bit (0.199 in.) Install using a maximum 2,000 rpm screw gun.

CAUTION: These fasteners shall not be struck with a hammer during installation.



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