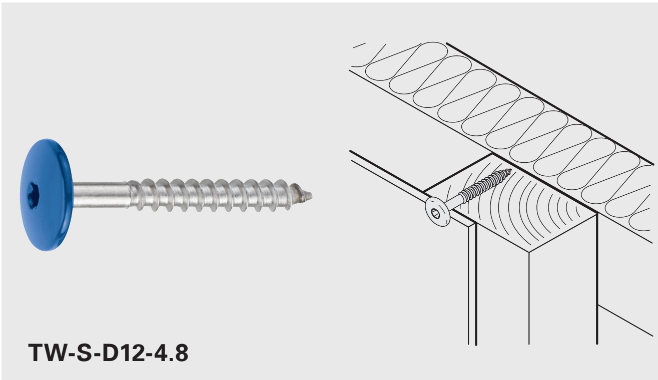
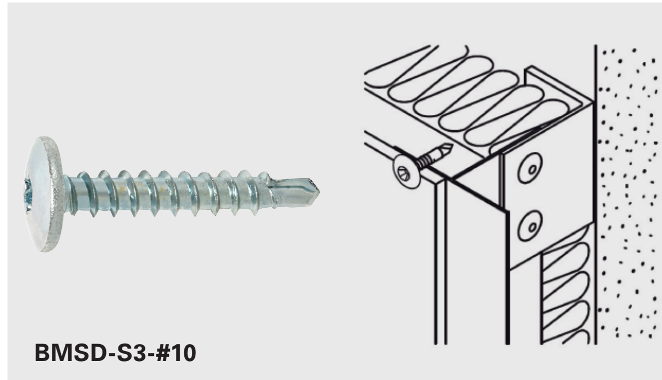
Fastener Technical Bulletin





The TW-S and BMSD 300 series austenitic stainless steel cladding fasteners by SFS were designed for attaching the Hardie® siding products to steel or wood timber battens.

The TW-S and BMSD 300 series austenitic stainless steel cladding fastener is specifically designed to be corrosion resistant and receptive to the field painting applications often required when using panels that are primed for paint.

TW-S Features and Benefits
- 304 Stainless steel provides maximum corrosion resistance.
- 316 Stainless steel is available by request.
- Low profile drive head for aesthetically pleasing appearance.

BMSD Features and Benefits
- Corrosion resistant 300 series stainless
- Bi-Metal fastener design allows for higher drilling capability while maintaining the corrosion resistance properties of stainless.
- Designed with a smaller drill point for superior strength in lighter gauge applications.
- Low profile head provides aesthetic appeal in exposed applications.

Product Selection - Panel to Wood

SFS Part #	SFS Global Code	Description	Thread Diameter	Head Style
1670765	TW-S-D12-4,8x25	#10-12 x 1"	0.189"	T20W Pan Head
1670767	TW-S-D12-4,8x30	#10-12 x 1-1/8"	0.189"	T20W Pan Head
1670768	TW-S-D12-4,8x38	#10-12 x 1-1/2"	0.189"	T20W Pan Head
1670769	TW-S-D12-4,8x44	#10-12 x 1-3/4"	0.189"	T20W Pan Head
1670770	TW-S-D12-4,8x60	#10-12 x 2-3/8"	0.189"	T20W Pan Head
1774018	TW-S-D12-4,8x76	#10-12 x 3"	0.189"	T20W Pan Head

Product Selection - Panel to Steel

SFS Part #	SFS Global Code	Description	Thread Diameter	Head Style
1556758	BMSD-S3-#10x1-1/8"-PN	#10-12 x 1-1/8"	0.191"	T20W Pan Head

No pilot hole required in framework.

Installation
TW-S: Install fasteners with 0–2500 RPM screw gun equipped with depth sensing nosepiece.
BMSD: Install fasteners with 0–2000 RPM screw gun equipped with depth sensing nosepiece.
Use of T20W drive bit is required (SFS # 895280)

TW-S / BMSD fastener supplier:
SFS Group USA, Inc.
T 1 610 790 2629
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SFS

Fastener Technical Bulletin

TW-S-D12

Product Specifications

Diameter:	#10 (4.8 mm)
Threads Per Inch:	12
Head Style:	0.473" (12.0 mm) Dome Head
Material:	304SS
Drive:	T20W
Drill Point:	Type A
Thread Major Dia:	0.191" (4.8 mm)
Thread Minor Dia:	0.132" (3.4 mm)

Performance Data[1,2,3]

Material Strength	
Tensile	1592 lbf / 7082 N
Shear	1214 lbf / 5400 N
Torsional	60 lbf·in / 6.6 N·m

Pull Out Strength Plywood		Pull Out Strength OSB (Oriented Strand Board)	
3/4" (19.1 mm)	578 lbf / 2571 N	**23/32" (18.3 mm)**	449 lbf / 1997 N
5/8" (15.9 mm)	438 lbf / 1948 N	**19/32" (15.1 mm)**	412 lbf / 1833 N
1/2" (12.7 mm)	348 lbf / 1548 N	**7/16" (11.1 mm)**	228 lbf / 1014 N

Pull Out Strength SYP Dimensional Lumber	
1x4	481 lbf / 2140 N

[1] SFS 4407.07
[2] CHTV 2016
[3] SFS 4450.08

Performance characteristics

For attaching to wood substrates, the TW-S-D12 from SFS meets or exceeds the performance characteristics of the following fastener types that are listed in ICC-ESR 1844 and ICC-ESR 2290:

- 4d common, 1-1/2" long nail
- 6d common, 2" long nail
- 11ga x 1-1/4" long galvanized roofing nail
- .091" shank x .225" HD x 1-1/2" long ring shank nail
- 6D siding nails (.092" shank x .222" HD x 2" long)
- No.8x1-5/8in. Long x .375in. HD ribbed wafer head screw
- 4d, .091in. Shank x .225" HDx1.5in. Long ring shank nail
- 16ga x 1.5" long stainless steel finish nails
- 4d stainless steel ring shank nail (.09"SDx.215"HD x 1.5" long)
- 8d ring shank box nail, .113" shank x .260" HD x 2.375" long

BMSD-S3-#10 (#10-12 Bi-Met 300®)

Product Specifications

Diameter:	#10 (4.9 mm)
Threads Per Inch:	12
Head Style:	15/32" Pan Head (11.9 mm)
Drive:	T20W
Material:	304SS
Drill Point:	SD2
Drill Capacity:	0.036"–0.060" (0.91 mm–1.52 mm)
Thread Major Dia:	0.191" (4.9 mm)
Thread Minor Dia:	0.132" (3.4 mm)

Performance Data[1, 2]

Material Strength	
Tensile	2798 lbf / 12446 N
Shear	1572 lbf / 6993 N
Torsional	92 lbf·in / 10.39 N·m

Pull Out Strength		Bearing Shear Steel	
16 Ga (1.5 mm)	448 lbf / 1993 N	**18 Ga–18 Ga (1.2 mm–1.2 mm)**	810 lbf / 3603 N
18 Ga (1.2 mm)	367 lbf / 1632 N	**20 Ga–20 Ga (0.9 mm–0.9 mm)**	765 lbf / 3403 N
20 Ga (0.9 mm)	258 lbf / 1148 N	**22 Ga–22 Ga (0.8 mm–0.8 mm)**	548 lbf / 2438 N

Pull Out Strength Aluminum	
2.5 mm L or T rail (0.98")*	772 lbf / 3434 N

[1] Available strengths listed herein are based on internal laboratory testing (5470-17)
[2] Values are based on grade 40 steel members with minimum yield strength of F_y = 40 ksi and minimum tensile strength of F_u = 55 ksi
*Values are only valid for aluminum supplied by SFS

Performance characteristics

For attaching to metal substrates, the #10-12 Bi-Met 300® from SFS meets or exceeds the performance characteristics of the following fastener types that are listed in ICC-ESR 1844 and ICC-ESR 2290:

- No. 8 x 1.25" long x .323" HD ribbed bugle head screw

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