

Clip Fasteners

Clip attachment fasteners
For metal to metal, metal to wood

- Designed with unique head styles, drill point configurations and material types to meet performance requirements to attach standing seam roof clips.

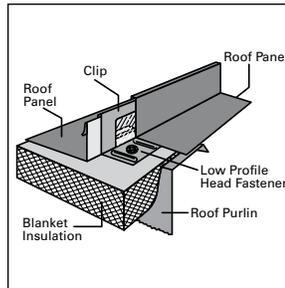
- Engineered profile features preventing panel damage from fastener head contact.
- Engineered installation torque drive control for uniform installation performance.

Application

**#10 Type A: Pancake Head
2/2 Quadrex Drive
Carbon Steel, Zinc Plated
Metal to wood**

**#10 Type A: Pancake Head
Phillips Drive
Stainless Steel
Metal to wood**

**#10 Self-Drill: Pancake Head
2/2 Quadrex Drive
Carbon Steel, Zinc Plated
Metal to metal
Min projection: 3/8" of threads
below substrate**



Head Height: .080 – .068
Head Dia: .447 – .423
Thread Major Dia: .194 – .188
Thread Minor Dia: .133 – .126

| Strength (lbs ult.): | Carbon | Stainless |
|-----------------------------|---------------|------------------|
| Tensile: | 1825 | 1653 |
| Torsional: | 48 in-lbs | 50 in-lbs |
| Shear: | 1535 | 1587 |

#10 Type A, Pull-out (lbs ult.):

SPF wood:
1" penetration: 821

#10 Self Drill, Pull-out (lbs ult.):

12 ga (.105): 1782
14 ga (.075): 1072
16 ga (.060): 782

**#12–8 XG Sharp Point: Pancake Head
2/2 Quadrex Drive
Carbon Steel, Zinc Plated
Metal to wood**



Head Height: .080 – .068
Head Dia: .447 – .423
Thread Major Dia: .215 – .209
Thread Minor Dia: .113 – .127

Strength (lbs ult.):
Tensile: 2183
Torsional: 60 in-lbs
Shear: 1946

Performance (lbs ult.): Pull-out

| | |
|------------------------|-----|
| SPF 1-1/2" Penetration | 874 |
| SPF 1" Penetration | 571 |
| 1x4" Pine | 590 |
| 3/4" Plywood | 587 |
| 5/8" Plywood | 446 |
| 1/2" Plywood | 384 |
| 23/32" OSB | 524 |
| 19/32" OSB | 456 |

**#12 Type A: Pancake Head
2/2 Quadrex Drive
Carbon Steel, Zinc Plated
Metal to wood**



Head Height: .080 – .068
Head Dia: .447 – .423
Thread Major Dia: .221 – .215
Thread Minor Dia: .162 – .155

Strength (lbs ult.):
Tensile: 1940
Torsional: 90 in-lbs
Shear: 1805

Pull-out (lbs ult.):

SPF wood:
1" penetration: 724

**#12 Self-Drill: Pancake Head
2/2 Quadrex Drive
Carbon Steel, Zinc Plated
Metal to metal**



Head Height: .090 – .078
Head Dia: .447 – .423
Thread Major Dia: .215 – .209
Thread Minor Dia: .164 – .157

Strength (lbs ult.):

Tensile: 2900
Torsional: 92 in-lbs
Shear: 2050

Pull-out (lbs ult.):

12 ga (.105): 1539
14 ga (.075): 1010
16 ga (.060): 724

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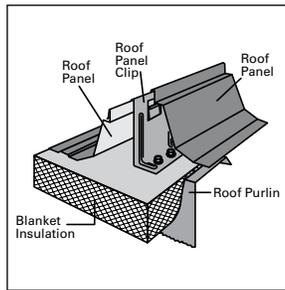
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Application

1/4 -14 #2 Point

Drilling capacity (#2 point): .050 – .150
Attachment thickness:
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Min projection: 3/8" of threads below substrate



5/16" AF Hex Washer Head
3/8" AF Hex Washer Head
Thread Major Dia: .246 – .240
Thread Minor Dia: .192 – .185
Strength (lbs ult.):
Tensile: 3800
Torsional: 150 in-lbs
Shear: 2850
#2 Point, Pull-out (lbs ult.):
12 ga (.105): 2088
14 ga (.075): 1312
16 ga (.060): 903

12-24 #5 Point: Pancake Head

2/2 Quadrex Drive
Carbon Steel, Zinc Plated
Metal to metal

Drilling capacity: .075 – .500
Attachment thickness:
Thickness is based on normal, single thickness purlin/girt or multiple material thickness combined for total.
Min projection: 3/8" of threads below substrate



Head Height: .090 – .078
Head Dia: .447 – .423
Thread Major Dia: .216 – .210
Thread Minor Dia: .186 – .181
Strength (lbs ult.):
Tensile: 3450
Torsional: 100 in-lbs
Shear: 2420
Pull-out (lbs ult.):
12 ga (.105): 1378
3/16" (.187): Exceeds tensile value
1/4" (.250): Exceeds tensile value

Notes

Dimensions are nominal inches unless noted. Pull-out values (pounds ultimate) are based on 50,000 psi hot rolled steel sheet material. Ultimate values listed are the result of laboratory testing. The specific job conditions should be considered and appropriate safety factors applied when specifying the proper fasteners.
Fasteners installed in less than 1" of solid wood may have an increased potential for a connection failure over time. This may be due to the fasteners being stripped out during installation and/or due to the lack of adequate wood fiber material to hold the fastener in place when forces are exerted upon the connection.

Selection

| Length | #10 Type A Pancake Carbon Steel | #10 Type A Pancake Stainless Steel | #10 Self-Drill Pancake | #12-8 XG Pancake | #12 Type A Pancake | #12 Self-Drill Pancake | 12-24 #5 Point Pancake | 1/4-14 #2 Point 5/16 AF HWH | 1/4-14 #2 Point 3/8 AF HWH |
|--------|---------------------------------|------------------------------------|------------------------|------------------|--------------------|------------------------|------------------------|-----------------------------|----------------------------|
| 1" | A1191F | E0235F | S3431F | A1900F | A1710F | S4552F | — | — | S5171F |
| 1-1/4" | — | — | — | — | — | — | — | S5191F | — |
| 1-1/2" | A1351F | — | S4221F | A1940F | — | — | S4750F | S5286F | S5271F |
| 2" | A1391F | E0271F | S4421F | A1950F | — | — | — | — | — |

Installation

Tools: 2000 – 2500 rpm #10 self drill, 0 – 2000 rpm on 1/4-14 self drill screwdriver equipped with depth sensing nosepiece.