

URFP/FRFP

Retrofit Foundation Plates

The URFP universal retrofit foundation plate is the new, improved version of the UFP, offering increased load while maintaining the same adjustability during installation. Ideal where there is minimum vertical clearance, the URFP provides a retrofit method to secure the mudsill to the foundation. This new design allows installation flexibility when the mudsill is offset or inset from the foundation edge. With its combination of longitudinal embossments, stiffening darts and scalloped slotted holes, the URFP allows for a one-for-one replacement of 1/2" or 5/8" mudsill anchors as well as fixity to both the SDS screws and required concrete anchorage.

The next generation FRFP flat retrofit foundation plate connects the mudsill to the foundation and provides lateral load resistance. This new design allows the Designer to maintain the same prescriptive requirements when filling the original three holes, or as an alternate, fill the newly added two optional triangle holes and Designers can utilize increased loads and greater allowable spacing.

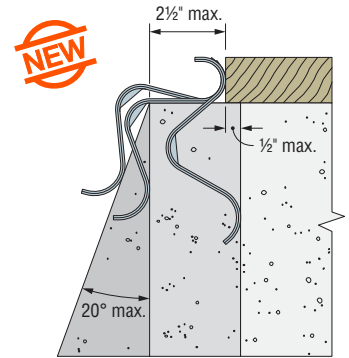
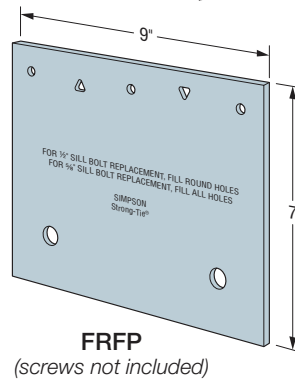
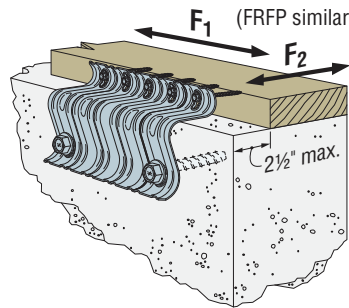
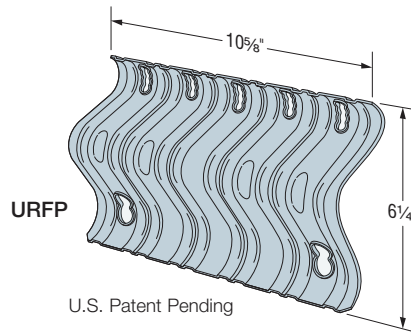
Material: URFP — 14 gauge; FRFP — 7 gauge

Finish: Galvanized. May be ordered HDG; contact Simpson Strong-Tie. See Corrosion Information, pp. 15–18.

Installation:

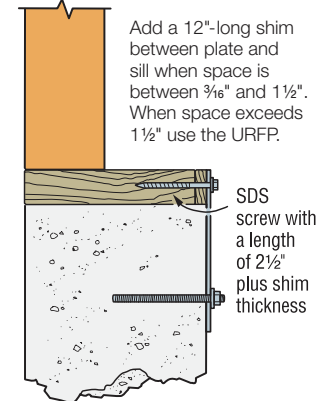
- Use all specified fasteners; see General Notes.
- Loads are based on test results using Simpson Strong-Tie® Strong-Drive® 1/4" x 3" SDS Heavy-Duty Connector screws, which are supplied with the URFP.
- For URFP, alternate lag screws will not achieve published loads.
- FRFP shall use a minimum Strong-Drive SDS Heavy-Duty Connector screw length of 2 1/2" plus the shim thickness. FRFP may be installed with 1/4" HDG lag screws. Follow code requirements for predrilling.

Codes: See p. 14 for Code Reference Key Chart



Typical URFP Installation for Three Foundation Types (End View)

URFP Installed on a Straight Foundation with 1/2" Offset Mudsill



Typical FRFP Installation Foundation to Mudsill

These products are available with additional corrosion protection. For more information, see p. 18.

Model No.	Fasteners			Allowable Loads DF/SP (160)		Code Ref.
	Anchor Bolt Qty.	Anchor Bolt Dia.	Sill Plate	F ₁	F ₂	
URFP	2	1/2"	(5) 1/4" x 3" SDS	1,530	—	120
FRFP	2	1/2"	(3) 1/4" x 2 1/2" SDS + shim thickness	1,065	365	
	2	1/2"	(5) 1/4" x 2 1/2" SDS + shim thickness	1,810	365	

1. Allowable loads have been increased for wind or earthquake loading with no further increase allowed; reduce where other load durations apply.
2. Each anchor bolt requires a standard-cut washer. The Simpson Strong-Tie Titen HD® heavy-duty screw anchor does not require a washer.
3. Nominal embedment depth for post-installed anchors must be a minimum of 4" and is for use with SET-XP® or AT-XP® structural anchoring adhesives or Titen HD screw anchors.
4. For redwood mudsills, reduce F₁ on FRFP to 820 lb. (1,395 lb. for five screws) and on URFP 10 1,180 lb.
5. For installation on SPF/HF sill plates, use 0.86 x DF/SF allowable load.
6. For additional retrofit information see flier F-SEISRETRGD at strongtie.com.

Prescriptive Spacing for URFP and FRFP to Replace Sill Anchor Bolts

Number of Building Stories	Anchor Bolt Size	Anchor Bolt Spacing	Retrofit Foundation Anchor Model		
			URFP	FRFP with Three Fasteners	FRFP with Five Fasteners
One story	1/2" dia.	6' o.c.	6'	6'	6'
	5/8" dia.	6' o.c.	6'	4'–3" ³	6'
Two stories	1/2" dia.	4' o.c.	4'	4'	4'
	5/8" dia.	6' o.c.	6'	4'–3" ³	6'
Three stories	5/8" dia.	4' o.c.	4'	2'–10" ³	4'

1. 'Prescriptive' denotes spacing requirements per the IBC and designs per the IRC and conventional provisions of the IBC.
2. For design in accordance with the IBC Chapter A3, the URFP may be used as a one-for-one replacement for the alternate connections shown in Figures A3-4A, A3-4B, and A3-4C.
3. FRFP with five Strong-Drive® SDSs may be used as a one-for-one replacement for 5/8" anchor bolts.
4. Spacing is based on the parallel to plate load direction.
5. 5/8" anchor bolt required for Seismic Design Category E.