

GP-Series™ Unpunched Gusset Plate

Use in conjunction with X-bracing in load-bearing shearwall assemblies to resist racking under wind and seismic loads.

Gusset plates and diagonal tension strapping components are used in combination to provide shearwall (racking restraint) for light-gauge, load-bearing framing under wind and seismic loads. Resisting uplift and shear forces, they are normally installed on both sides of the wall directly over the framing members.

CAUTION: Racking loads are first transferred to the roof or floor decking and then to the shearwalls (X-bracing). The X-bracing then relies on a proper anchorage to the foundation to resist uplift and shear forces. In order for the system to function properly, the load path from the roof or floor deck to the shearwalls to the foundation must be complete. This normally requires additional bracing, blocking, track and rim splices, drag struts, uplift anchors and heavy-duty foundations.

PRODUCT DIMENSIONS

6" x 6"

6" x 12"

12" x 12"

Custom sizes, shapes, and gauges available.

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mil)

Design Thickness: 0.0566 inches

Gauge: 14 gauge (68mil)

Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mil)

Design Thickness: 0.1017 inches

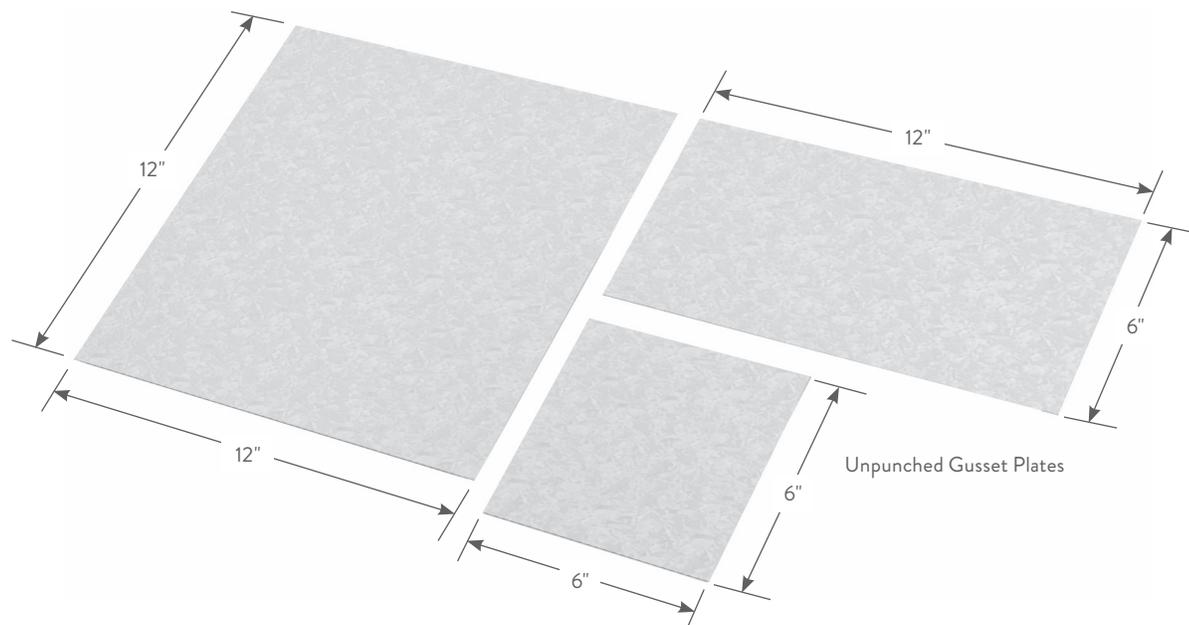
Coating: G90

Yield Strength: 50ksi

ASTM: A653/A653M

INSTALLATION

Straps are positioned diagonally from the bottom track to the top track. In order to resist load in each direction, an X-configuration should be used. At a minimum, double studs are positioned at ends of the X-brace to serve as compression studs. Straps are either attached directly to the compression studs or are attached via gusset plates. Compression studs must be anchored to the foundation, normally with uplift anchors. For multi-story construction, the uplift loads can be extremely high. It is recommended that the services of a qualified professional engineer be used to verify the applicability of the system selected.



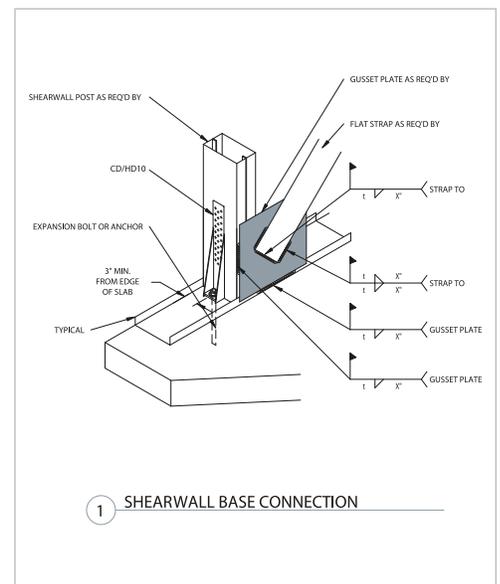
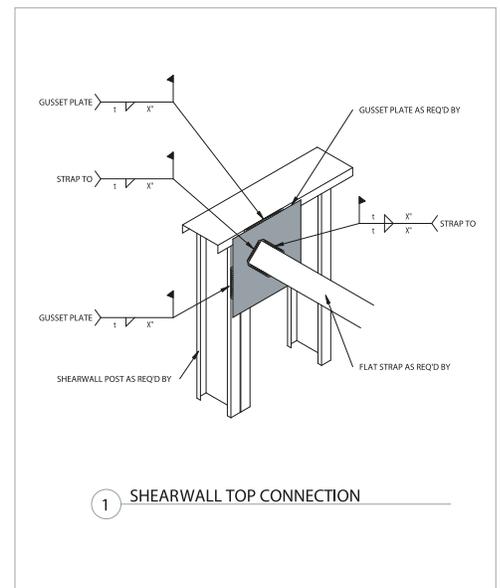
Unpunched Gusset Plates for ShearWall Bracing

Product code	Thickness		Plate size (in)	Packaging Pcs.
	Mils (Gauge)	Design thickness (in)		
GP	54mil (16ga)	0.0566	6 x 6	25
			6 x 12	25
			12 x 12	25
	97mil (12ga)	0.1017	6 x 6	25
			6 x 12	25
			12 x 12	25



GP-Series unpunched gusset plates are also used to facilitate connections between chord members for in-plane framing.

Typical Construction Details



Visit our CAD Library at clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

G-Series™ Punched Gusset Plate

A multipurpose connector used for a variety of framing connections.

G-Series™ punched gusset plates come with multi-hole shapes for proper fastening to achieve desired performance. Used in a variety of framing connections—including roof framing, header framing and shearwall applications—the gusset plates eliminate angled cutting. Prepunched for easier, faster attachments, the gusset plates adapt to multiple configurations and varying construction tolerances.

CAUTION: Racking loads are first transferred to the roof or floor decking and then to the shearwalls (X-bracing). The X-bracing then relies on a proper anchorage to the foundation to resist uplift and shear forces. In order for the system to function properly, the load path from the roof or floor deck to the shearwalls to the foundation must be complete. This normally requires additional bracing, blocking, track and rim splices, drag struts, uplift anchors and heavy-duty foundations.

PRODUCT DIMENSIONS

6" x 8-1/2"

MATERIAL SPECIFICATIONS

Gauge: 18 gauge (43mil)

Design Thickness: 0.0451 inches

Gauge: 16 gauge (54mil)

Design Thickness: 0.0566 inches

Gauge: 14 gauge (68mil)

Design Thickness: 0.0713 inches

Coating: G90

Yield Strength: 33ksi for 18 gauge

50ksi for 14 & 16 gauge

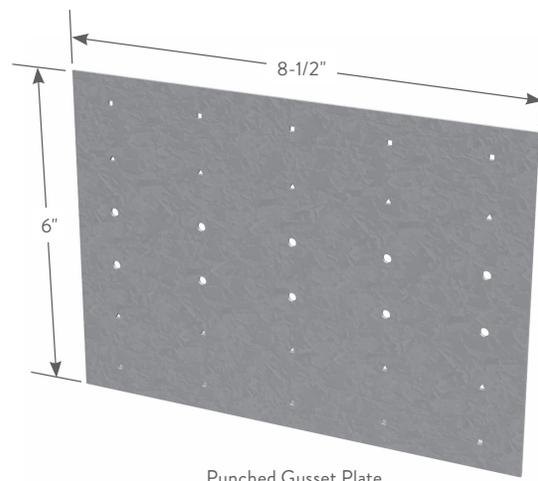
ASTM: A653/A653M

INSTALLATION

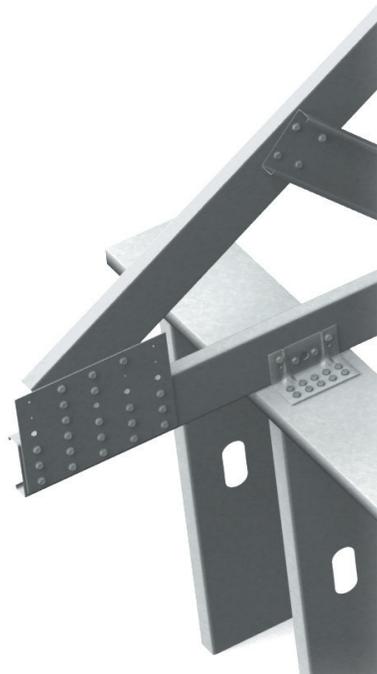
Straps are positioned diagonally from the bottom track to the top track. In order to resist load in each direction, an X-configuration should be used. At a minimum, double studs are positioned at ends of the X-brace to serve as compression studs. Straps are either attached directly to the compression studs or are attached via gusset plates. Compression studs must be anchored to the foundation, normally with ClarkDietrich holdowns. For multi-story construction, the uplift loads can be extremely high. It is recommended that the services of a qualified professional engineer be used to verify the applicability of the system selected.

G-Series™ Punched Gusset Plates

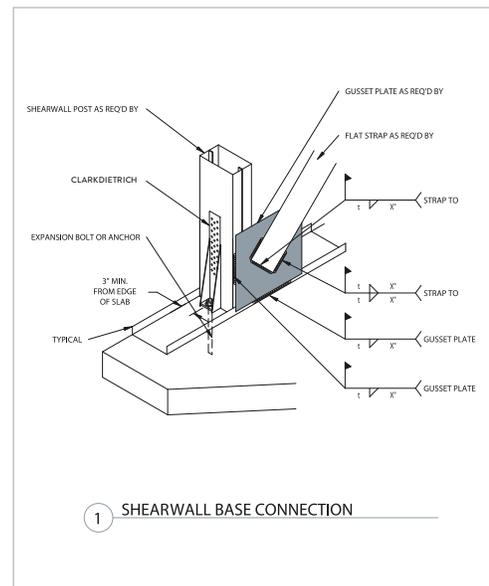
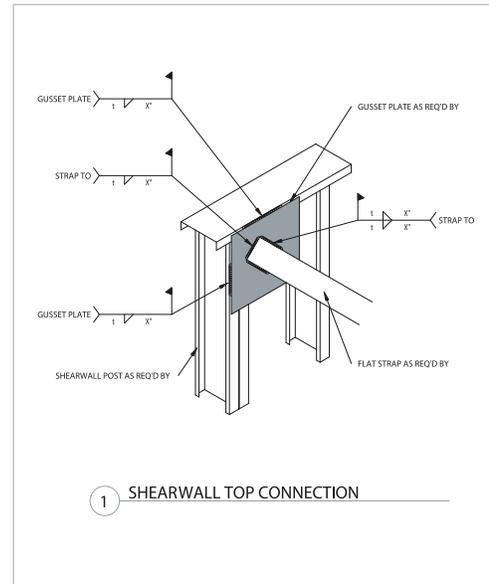
Product code	Thickness		Size (in)	Packaging Pcs./Bucket
	Mils (Gauge)	Design thickness (in)		
G436	43mil (18ga)	0.0451	6 x 8-1/2	50
G546	54mil (16ga)	0.0566	6 x 8-1/2	50
G686	68mil (14ga)	0.0713	6 x 8-1/2	50



Punched Gusset Plate



Typical Construction Details



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