

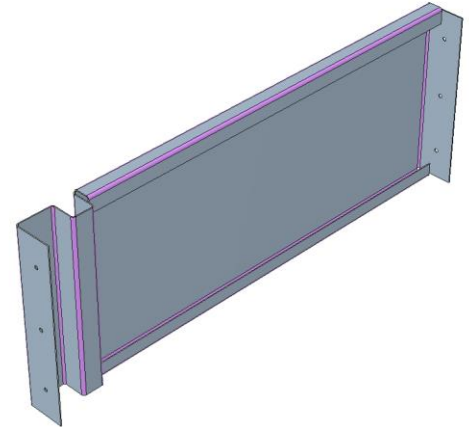


STEELTEC SUPPLY, INC.

FLUSH BACKING PLATE (ESB)

Unique backing support profile for flush mounting between studs and use as backing support of vertical and horizontal loads. Perfect for wall hung equipment, cabinets, grab bars, hand rails and items requiring heavy-duty backing.

- Limitation of flanges is critical as object of Flush Backing Plate (FBP) is to reduce protrusion into a wall cavity of 1" or less enabling profile to be installed without interfering with vertical obstructions (pipes, wires, ducts, etc...). This profile with Lip Returns provide strength for securing wall hung items (i.e. in comparison to a simple "flat stock" which has far inferior load capabilities).
- Building code requires that MEP's (Mechanical, Electrical and Plumbing) be located within cavity at least 1" from wall sheathing.



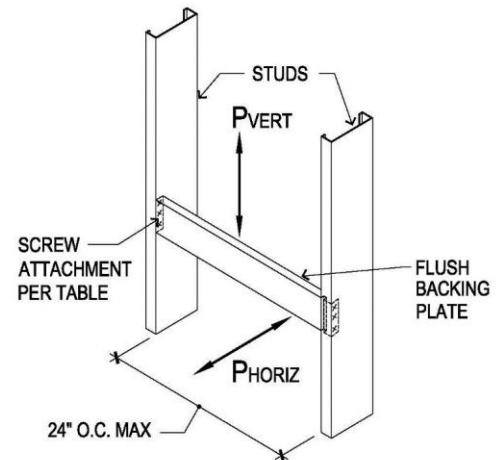
PATENT PENDING

Advantages:

- Flush profile installation
- Supports heavy load conditions
- Pre-fabricated ends to accommodate studs attachment
- Flange of 1/2" or 1" reduces filed modification to accommodate wall cavity obstructions
- Reduces interference (i.e. notched track leg profile) for MEP installation in wall cavity
- Improved fit for narrow cavity conditions
- Provides bracing and bridging support

Meets Requirements:

ADAAG Section 4.26 – (Handrails, Grab Bars, Tub and Shower Seats)
 OSHA and ICC/A117.1 – Section 609 (Grab Bars) and 610 (Seats) Load Requirements
 OSHPD 2013 CBC – Standard Backing for Cabinets and Grab Bars (Details ST5.00, ST5.01 and ST5.03)



BACKING MEMBER TO STUDS

Leed Points

- MR 2.1 & 2.2 – Construction Waste: up to 2pts
- MR 4.1 & 4.2 – Recycled Content: up to 2pts
- MR 5.1 & 5.2 – Regional Proximity

Follow this example when ordering Extra Strength Backing.

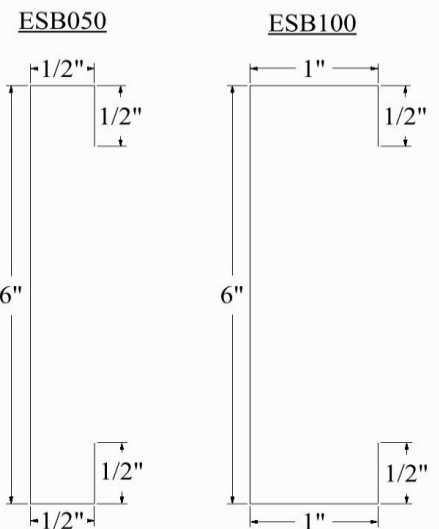
Example:

600 FBP 050 16 – 54 G

- Width – 6"
- Flush Backing Plate
- Leg – 1/2"
- Spacing – 16" O.C.
- Material Thickness – 54 mil
- Coating – Galvanized

ASTM & Code Standards

ADAAG Section 4.26
 OSHPD 2013 CBC (ST5.00 & ST5.03)
 A1003, A653, A924, C645, C754, C955
 2006 & 2009 IBC





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FLUSH BACKING PLATE (FBP)

STEELTEC – FLUSH BACKING PLATE (FBP) - WITH ½" AND 1" FLANGE

Allowable Section Properties - Per AISI Design Criteria

Steeltec ESB Member	GA	Thickness (mils)	Depth (IN)	Flange (IN)	Fy (KSI)	Ixe (min) (IN ⁴)	Sxe (min) (IN ³)	Iye (min) (IN ⁴)	Sye (min) (IN ³)
600FBP050-33	20	33	6	0.050	33	1.085	0.357	0.007	0.018
600FBP050-43	18	43	6	0.050	33	1.416	0.472	0.009	0.022
600FBP050-54	16	54	6	0.050	50	1.736	0.579	0.010	0.026
600FBP100-43	18	43	6	1.000	33	1.816	0.605	0.046	0.060
600FBP100-54	16	54	6	1.000	50	2.236	0.745	0.056	0.072

Allowable Capacities Used For Vertical & Horizontal Point Loads

Allowable Load Capacities (Studs Spaced @ 16" o.c.)

(Limited By Screw Fastener to Stud)

Member	#10 Screw Quantity ¹⁰	Load Direction	Pmax (lb) @ 30mil Studs	Pmax (lb) @ 43mil Studs	Pmax (lb) @ 54mil Studs
600FBP050-33	2	Vertical	302	354	354
		Horizontal	84	84	84
600FBP050-33	3	Vertical	453	531	531
		Horizontal	84	84	84
600FBP050-43	3	Vertical	453	789	789
		Horizontal	105	105	105
600FBP050-43	4	Vertical	604	1052	1052
		Horizontal	105	105	105
600FBP100-43	3	Vertical	453	789	789
		Horizontal	228	282	282
600FBP100-43	4	Vertical	604	1052	1052
		Horizontal	282	282	282
600FBP050-54	3	Vertical	453	789	1500
		Horizontal	189	189	189
600FBP050-54	4	Vertical	604	1052	2000
		Horizontal	189	189	189
600FBP100-54	3	Vertical	453	789	1500
		Horizontal	228	327	513
600FBP100-54	4	Vertical	604	1052	2000
		Horizontal	304	436	513

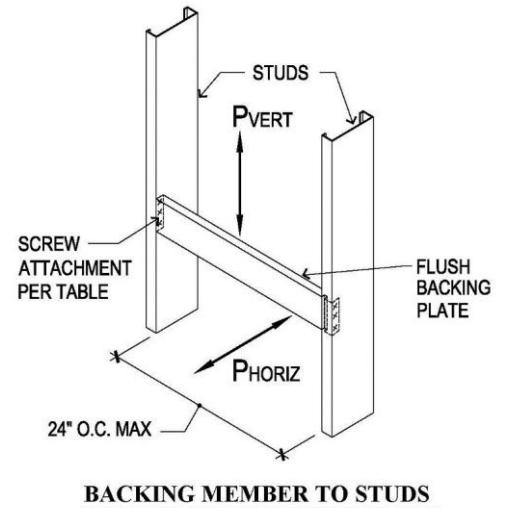


Table Notes:

- Design thickness to be per SSMA; 33mil = 0.0346", 43mil = 0.0451", 54mil = 0.0566"
- Capacities based on backing member properties only and not consider stud capacity. Stud design by others.
- P_{MAX} (point load) is the maximum PVERT or PHORIZ load, and is assumed to act at the mid-span through the centroid (shear center) of the backing member.
- Analysis assumes a maximum stud spacing of 16" o.c.
- Table values assume vertical and horizontal loads do not occur simultaneously (loads are assumed at worst case condition).
- All calculations based on 2007 AISI.
- Properties of FBP backing members for this table have been calculated using CFS version 7.0.0 (RSG Software).
- Member analysis assumes that the materials and protective coatings for the cold-formed steel used to manufacture the Flush Backing Plate members matches the relevant ASTM requirements used for the production of SSMA members.
- Minimum screw spacing and edge distance shall not be less than three times the nominal screw diameter (per SSMA).
For #10 screw 3 x d = 3 x 0.190" diameter = 0.57"
- "Screw Quantity" indicates number of screws from backing to each stud and assumes no loading occurs at adjacent bay simultaneously.
- Screw manufacturer shall confirm that their screws meet the code allowable capacity indicated in the table. Screws shall be per ASTM C1002, or ASTM C954 with coating per ASTM F1941.
- Architect or Engineer of record to determine profile required and verify adequate connection of profile, wall, and attachment to structure.