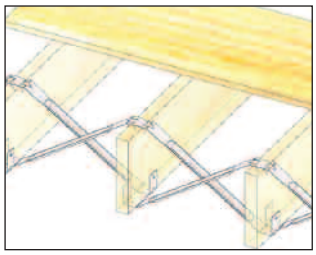
O – The O series spans three joists in under/over installation. Prong teeth in the center help reduce nailing.

N – The N series spans two joists per unit. Can be used for bridging or bracing I-Joists. See chart.

Materials: See chart
Finish: G90 galvanizing
Codes: ESR-1781

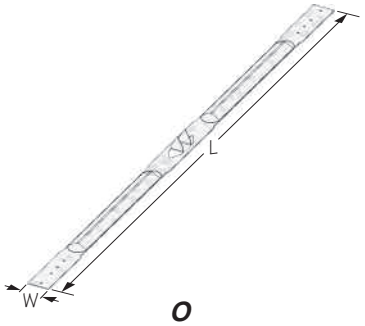


Typical *O* installation

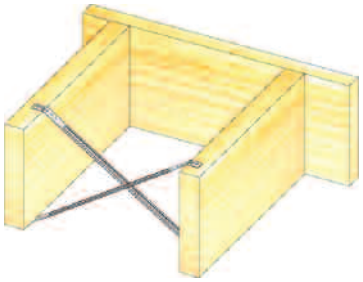
Installation:
• Use specified fasteners in models with fastener requirements.
• For all models – Bridging should be installed on floor joists with a nominal depth-to-thickness ratio of 5 to 6 or more (2001 National Design Specification for Wood Construction; Section 4.4). Bridging units should be installed in pairs at intervals of 8´. Bridging pairs should form an "X" between joists; leave a slight space between the units to avoid noise-generating contact. Follow specific installation instructions below for particular models.
• Install prior to subfloor sheathing. Use (2) 8d x 1½˝ nails at each end. Fully seat nails to avoid any movement against the bridging and subsequent floor noise.

USP Stock No.	Ref. No.	Steel Gauge	Dimensions		Fastener Schedule[1]		Joist Spacing O.C.	Code Ref.
			W	L	Qty	Type		
N16	LTB20	22	3/4	19-3/4	4	8d x 1-1/2	16	5
N27	TB27	20	3/4	26-13/16	4	8d x 1-1/2	-- --	
N30	TB30	20	3/4	29-13/16	4	8d x 1-1/2	-- --	
N36	TB36	20	3/4	35-13/16	4	8d x 1-1/2	-- --	
N42	TB42	20	3/4	42	4	8d x 1-1/2	-- --	
N48	TB48	20	3/4	48	4	8d x 1-1/2	-- --	
N54	TB54	20	3/4	54	4	8d x 1-1/2	-- --	
N56	TB56	20	1	56	4	8d x 1-1/2	-- --	
N60	TB60	20	1	60	4	8d x 1-1/2	-- --	
O16	-- --	18	1	44	4	8d x 1-1/2	16	120
O16E	-- --	22	1	44	4	8d x 1-1/2	16	
O40	LTB40	22	3/4	39-3/4	4	8d x 1-1/2	16	5

1) 8d x 1-1/2 nails are 11 gauge (0.131˝ diameter) by 1-1/2˝ long.
2) For joist spacing, refer to the Joist Installation chart.
3) Joist spacing is based on a 1-1/2˝ joist. Consult USP regarding wider joist applications.



O

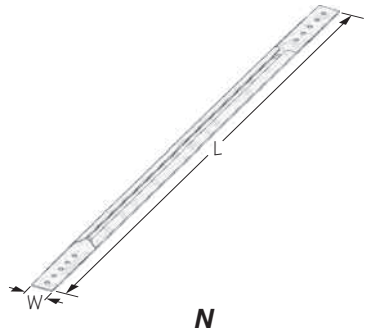


Typical *N* installation

Joist Installations

I-Beam Height	Sized for Joist-to-Joist X Bridging Joist Spacing[1]								
	12˝	16˝	19.2˝	24˝	30˝	32˝	36˝	42˝	48˝
7-1/4	-- --	N16/O16 O16E/O40	-- --	-- --	-- --	-- --	-- --	-- --	-- --
9-1/4	N16	N16/O16 O16E/O40	N27	N27/N30	N36	N36/N42	N42	N48	N54/N56
9-1/2	N16	N16	N27	N27/N30	N36	N36/N42	N42	N48	N54/N56
10	N16	N16	N27	N27/N30	N36	N36/N42	N42	N48	N54/N56
11-1/4	N16	N16	N27	N30	N36	N36/N42	N42	N48	N54/N56
11-7/8	N16	N27	N27	N30	N36	N36/N42	N42	N48	N54/N56
12	N16	N27	N27	N30	N36	N36/N42	N42	N48	N54/N56
14	N16	N27	N27/N30	N30	N36/N42	N36/N42	N42	N48	N54/N56
16	N27	N27	N27/N30	N30	N36/N42	N42	N42/N48	N48/N54	N54/N56
18	N27	N27/N30	N30	N36	N36/N42	N42	N42/N48	N48/N54	N54/N56
20	N27/N30	N27/N30	N30	N36	N42	N42	N42/N48	N48/N54	N54/N56/N60
22	N27/N30	N30	N36	N36/N42	N42	N42/N48	N48	N54/N56	N54/N56/N60
24	N30	N36	N36	N36/N42	N42	N42/N48	N48	N54/N56	N56/N60
26	N30/N36	N36	N36/N42	N42	N42/N48	N48	N48/N54	N54/N56	N56/N60
28	N36	N36/N42	N36/N42	N42	N42/N48	N48	N48/N54	N54/N56	N60
30	N36/N42	N36/N42	N42	N42/N48	N48	N48	N48/N54/N56	N54/N56/N60	N60
32	N36/N42	N42	N42	N42/N48	N48	N48/N54	N54/N56	N54/N56/N60	N60

All models require (2) 8d x 1-1/2 nails at each end.
1) Based on 1-1/2˝ joist. Consult USP for suitable product for wider joists.



N

BRN – Nail-on bridging. Spans two joists and can be installed after subfloor is in place.

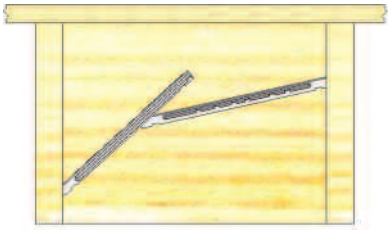
G & MBG – Grip tooth bridging. Features special teeth which grip joists and provide easy single-nail installation. Can be installed after subfloor is in place.

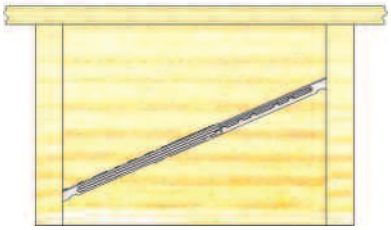
MB16 – Snap-on, no-nail bridging can be placed in existing floor systems where joist movement is suspected. Two-piece construction creates a solid diagonal brace against joist movement.

Materials: See chart
Finish: G90 galvanizing
Codes: ESR-1781

Installation:
• Use specified fasteners in models with fastener requirements.
• For all models – Bridging should be installed on floor joists with a nominal depth-to-thickness ratio of 5 to 6 or more (2001 National Design Specification for Wood Construction; Section 4.4). Bridging units should be installed in pairs at intervals of 8´. Bridging pairs should form an "X" between joists; leave a slight space between the units to avoid noise-generating contact. Follow specific installation instructions below for particular models.
• G & MBG – May be installed before or after sheathing. Position the unbent end of the bridging unit near the top of the joist and drive prongs into wood with a hammer blow to the heel of the bent end. Wedge bent end near the lower edge of the opposite joist, set teeth into wood with hammer blow. Nail holes are provided at the bent end if prongs are damaged during installation. Fully seat nails to avoid any movement against the bridging and subsequent floor noise.
• BRN – Fasten with (2) 8d x 1½˝ nails at each end. Fully seat nails to avoid any movement against the bridging and subsequent floor noise.
• MB16 – Two-piece unit is shipped as one piece. Bend unit in center up and down to break into two pieces. Slide narrower piece inside wider piece, setting the end tab into slot appropriate for joist spacing. Setting one prong end near the top of one joist and the opposite prong end near the bottom of the opposite joist, pull down on the center of the bridging until the wider piece snaps into place over the narrow piece and creates a rigid, one-piece bridging unit. Wear gloves during installation.

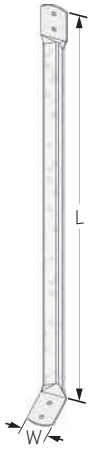
Joist Size	Joist Spacing O.C.[2]	USP Stock No.	Ref. No.	Steel Gauge	Dimensions		Fastener Schedule[1]		Code Ref.
					W	L	Qty	Type	
2 x 8	12	BRN812	-- --	16	1	12-1/2	4	8d x 1-1/2	5
2 x 10	12	BRN1012	-- --	16	1	13-3/8	4	8d x 1-1/2	
2 x 12	12	BRN1212	-- --	16	1	14-3/8	4	8d x 1-1/2	
2 x 14	12	BRN1412	-- --	16	1	16-7/16	4	8d x 1-1/2	
2 x 16	12	BRN1612	-- --	16	1	19-7/8	4	8d x 1-1/2	120
2 x 8	16	BRN816	-- --	16	1	16	4	8d x 1-1/2	5
2 x 10	16	BRN1016	-- --	16	1	17	4	8d x 1-1/2	
2 x 12	16	BRN1216	-- --	16	1	18-1/2	4	8d x 1-1/2	
2 x 14	16	BRN1416	-- --	16	1	18-3/4	4	8d x 1-1/2	
2 x 16	16	BRN1616	-- --	16	1	19-7/8	4	8d x 1-1/2	
2 x 8	24	BRN824	-- --	16	1	23-7/8	4	8d x 1-1/2	120
2 x 10	24	BRN1024	-- --	16	1	24-1/4	4	8d x 1-1/2	5
2 x 12	24	BRN1224	-- --	16	1	24-7/8	4	8d x 1-1/2	
2 x 14	24	BRN1424	-- --	16	1	25-5/8	4	8d x 1-1/2	
2 x 16	24	BRN1624	-- --	16	1	26-1/2	4	8d x 1-1/2	
2 x 8	12	G812	NC2X8-12	18	15/16	11-3/4	1	8d x 1-1/2	
2 x 12	12	G1212	NC2X12-12	18	1-5/16	14	1	8d x 1-1/2	
2 x 8	16	G816	NC2X8-16	18	15/16	15-9/16	1	8d x 1-1/2	
2 x 12	16	G1216	NC2X12-16	18	1-5/16	17-1/4	1	8d x 1-1/2	
2 x 14	16	G1416	NC2X14-16	18	15/16	18-7/16	1	8d x 1-1/2	
2 x 16	16	G1616	NC2X16-16	18	15/16	19-5/8	1	8d x 1-1/2	
2 x 8	24	G824	-- --	18	1-5/16	23-1/2	1	8d x 1-1/2	
2 x 10	24	G1024	NC2X10-24	18	1-5/16	24	1	8d x 1-1/2	
2 x 12	24	G1224	NC2X12-24	18	1-5/16	24-3/4	1	8d x 1-1/2	
2 x 14	24	G1424	NC2X14-24	18	1-5/16	25-5/8	1	8d x 1-1/2	
2 x 16	24	G1624	NC2X16-24	18	15/16	26-5/8	1	8d x 1-1/2	



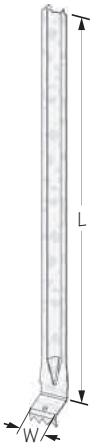


Typical *MB16* installation

MB16



BRN

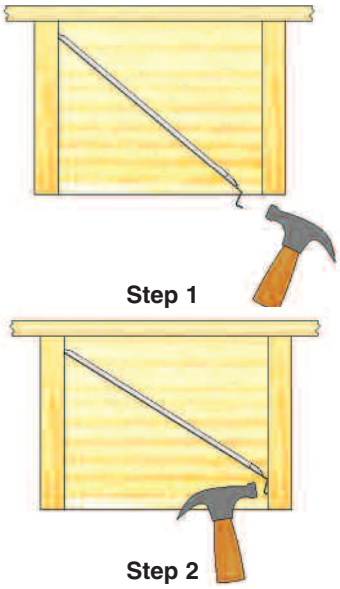


G & MBG

continued on next page

Joist Size	Joist Spacing O.C.[2]	USP Stock No.	Ref. No.	Steel Gauge	Dimensions W	Dimensions L	Fastener Schedule[1] Qty	Fastener Schedule[1] Type	Code Ref.
2 x 8	12	MBG812	NCA2X8-12	22	15/16	11-3/4	1	8d x 1-1/2	
2 x 10	12	MBG1012	NCA2X10-12	22	15/16	12-3/4	1	8d x 1-1/2	
2 x 12	12	MBG1212	NCA2X12-12	22	15/16	14	1	8d x 1-1/2	
2 x 14	12	MBG1412	-- --	22	15/16	16	1	8d x 1-1/2	
2 x 16	12	MBG1612	-- --	22	15/16	17	1	8d x 1-1/2	
2 x 8 - 10 - 12	16	MB16	-- --	22	11/16	-- --	-- --	-- --	
2 x 8	16	MBG816	NCA2X8-16	22	15/16	15-9/16	1	8d x 1-1/2	
2 x 10	16	MBG1016	NCA2X10-16	22	15/16	16-5/16	1	8d x 1-1/2	
2 x 12	16	MBG1216	NCA2X12-16	22	15/16	17-1/4	1	8d x 1-1/2	5
2 x 14	16	MBG1416	-- --	22	15/16	18-7/16	1	8d x 1-1/2	
2 x 16	16	MBG1616	-- --	22	15/16	19-5/8	1	8d x 1-1/2	
2 x 8	24	MBG824	-- --	22	1-5/16	23-1/2	1	8d x 1-1/2	
2 x 10	24	MBG1024	-- --	22	1-5/16	24	1	8d x 1-1/2	
2 x 12	24	MBG1224	-- --	22	1-5/16	24-3/4	1	8d x 1-1/2	
2 x 14	24	MBG1424	-- --	22	1-5/16	25-5/8	1	8d x 1-1/2	
2 x 16	24	MBG1624	-- --	22	15/16	26-5/8	1	8d x 1-1/2	

1) 8d x 1-1/2 nails are 11 gauge (0.131″ diameter) by 1-1/2″ long.
2) Joist spacing is based on a 1-1/2″ joist, consult USP regarding wider joist applications.



Typical *G* & *MBG* installation

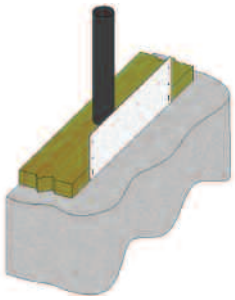
PROTECTION PLATES – ICPL SERIES, KNS1, & PL4

Easy-to-install plates protect plumbing and power/communication wiring from nail or screw penetration.

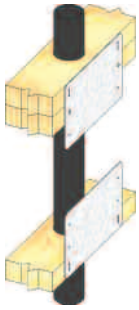
ICPL58 – Installs with nails.

KNS1 & PL4 – Prongs allow for quick installation.

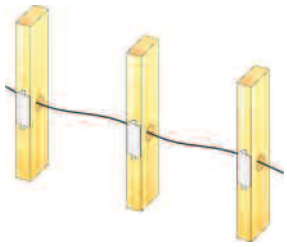
Materials: 16 gauge
Finish: ICPL516-TZ – G-185 galvanizing; All other – Galvanized
Options: ICPL58 is available in Triple Zinc. To order, add *TZ*, to stock number, as in **ICPL58-TZ.**



Typical *ICPL516-TZ* installation

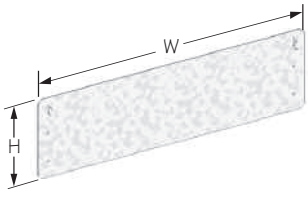


Typical *ICPL58* installation



Typical *ID4*, *KNS1*, & *PL4* installation

Installation:
• Use all specified fasteners. See Product Notes, page 10.
• 16 gauge steel conforms to protection shield plate requirements of the National Electrical Code and International Plumbing Code.



ICPL516-TZ

ICPL58

USP Stock No.	Ref. No.	Steel Thickness	Dimensions W	Dimensions H	Fastener Schedule[1] Qty	Fastener Schedule[1] Type	Code Ref.
ICPL58	PSPN58	1/16	8-1/16	5	4	8d or prongs	100
PL4	NS2	1/16	2	5	-- --	prongs	
KNS1	NS1	1/16	1-1/2	3	-- --	prongs	

USP Stock No.	Ref. No.	Steel Thickness	Dimensions W	Dimensions H	Installation Type	Fastener Schedule[2] Qty	Fastener Schedule[2] Type	Allowable Loads[1] DF-L / SP 160%	Allowable Loads[1] S-P-F 160%	Code Ref.
ICPL516-TZ	PSPN516Z	1/16	16-1/4	5	Sill Plate	12	16d + prongs	1355	1160	100
					Double Top Plate	16	16d + prongs	1805	1550	

1) Allowable loads have been increased 60% for wind or seismic loads; no further increase shall be permitted.
2) Minimum nail penetration shall be 1-5/8″ for 16d nails.

KNS1

PL4

RWB – Flat bracing conveniently packaged in a handy roll out dispenser. Perfect for unexpected job site shortages. The 35-pound dispenser pack fits easily into a truck bed for transport. Pre-embossed snap-off points can be broken off by hand (wear gloves for safety).

S360 & S361 – Heavier construction and unique design make these models the easiest and fastest to install in the industry. Pre-tapered ends wrap over the top plate and under the bottom plate. No saw kerfs or notching necessary.

S365, S366, & S367 – T-style bracing.

WB – A flat style bracing engineered to easily nail to studs. No cutting or fitting needed.

WBC – The L-shaped design for additional strength and rigidity.

WBT – Rolled edges and T-style design gives the WBT strength, rigidity, and eliminates sharp, sheared edges.

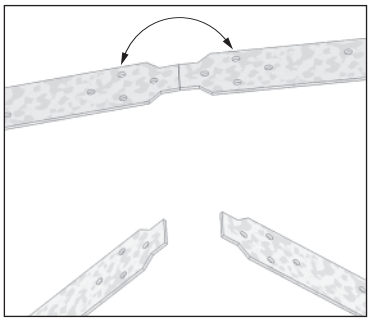
Materials: See chart
Finish: G90 galvanizing
Codes: ESR-1831, ESR-1781, FL816, FL822

Installation:
• Use all specified fasteners. See Product Notes, page 10.
• Bracing is a framing aid, not a substitute for structural shearwall components.
• RWB & WB – Use with 16″ or 24″ o.c. studs. Install in pairs forming an "X" or opposing "V" at each end of a maximum 25-foot long wall panel.

Steps: Square the panel. Straighten any kinks in bracing caused by handling. Lay bracing on the panel flush to the top of top plate and flush to the bottom of the bottom plate. Secure bracing to the top plate and bottom plate using 16d nails (WB) or 8d nails (RWB). Position second bracing at an angle opposite to the first brace to form an "X" and secure to top and bottom plate as with the first bracing. Using 8d nails, secure bracing to all intersecting studs.

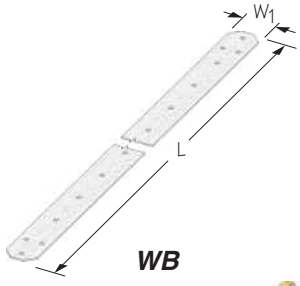
• WBC & WBT – Use with 16″ o.c. studs. Install one brace at each end of wall section, not exceeding 25 feet, in an opposing "V" pattern. Use a length of the bracing as a straight web to mark studs. Cut a saw kerf 5⁄8″ deep (1″ deep for WBC). Insert the bracing web into the saw kerf, and drive one nail into the top plate. Raise the wall section into place and plumb. Finish fastening according to the nail schedule.
• S365, S366, & S367 – Use with 16″ o.c. studs. Install one brace at each end of wall section, not exceeding 25 feet, in an opposing "V" pattern. Use a length of the bracing to mark studs (the 9′ 3″ length at 60° or the 11′ 3 3⁄4″ length at 45°. Cut a single 1⁄2″ deep saw kerf into the studs and plates on the marked line. Insert bracing web into the saw kerf and nail the bracing to the studs with (2) 8d common nails in each intersecting stud and plate.
• S360 & S361 – Use with 16″ o.c. studs. Install one brace at each end of a wall section, not exceeding 25 feet, in an opposing "V" pattern.

Steps: Square the panel. Straighten any kinks in bracing caused by handling. Lay the bracing on the panel with 3″ overhanging both the top and bottom plate. Secure the bracing to each stud with an 8d nail. Wrap ends around the top and bottom plates and nail in place to each plate (3) 8d nails: (2) 8d nails into wide face end, (1) 8d nail into narrow face. **Important: the ends must be wrapped around the top and bottom plates to pass code requirements.**

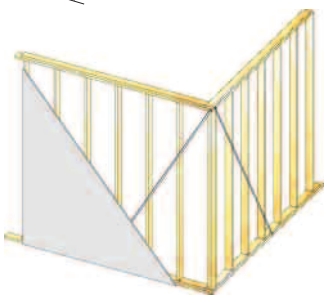


***RWB* pre-embossed snap-off points**

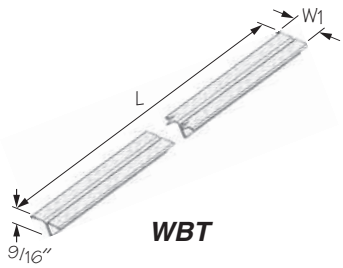
Typical *RWB*, *WB* installation



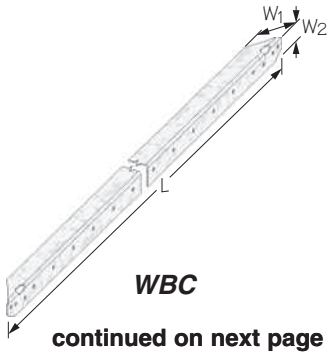
WB



Typical *WBC* / *WBT* installation



WBT

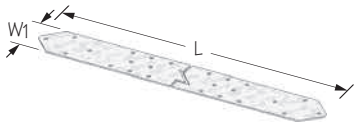


WBC

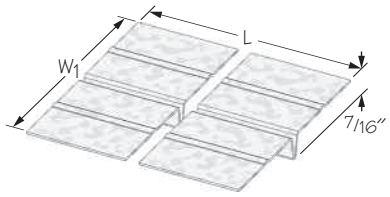
continued on next page

USP Stock No.[1]	Ref. No.	Steel Gauge	Dimensions W1	Dimensions W2	Dimensions L	Pieces Per Roll	Wall Height	Install Angle	Fastener Schedule[2] Each Plate Qty	Each Plate Type	Each Stud Qty	Each Stud Type	Code Ref.
RWB96	WB106C	16	1-1/4″	-- --	9' 6″	15	8'	60°	4	8d	1	8d	10
RWB114	WB126C	16	1-1/4″	-- --	11' 4-3/8″	12	8'	45°	4	8d	1	8d	
RWB143	WB143C	16	1-1/4″	-- --	14' 3″	10	10'	45°	4	8d	1	8d	
WBC10	CWB106	18	7/8″	1″	9' 5-3/4″	-- --	8'	60°	2	16d	1	8d	10, F16
WBC12	CWB126	18	7/8″	1″	11' 4-3/8″	-- --	8'	45°	2	16d	1	8d	
WBT10	TWB10	22	1-3/8″	-- --	9' 3″	-- --	8'	60°	4	8d	1	8d	
WBT12	TWB12	22	1-3/8″	-- --	11' 4″	-- --	8'	45°	2	8d	1	8d	
WBT14	TWB14	22	1-3/8″	-- --	14' 2″	-- --	10'	45°	2	8d	1	8d	
WB106	WB106	16	1-1/4″	-- --	9' 5-1/2″	-- --	8'	60°	3	16d	1	8d	
WB126	WB126	16	1-1/4″	-- --	11' 4-1/4″	-- --	8'	45°	3	16d	1	8d	
S365	-- --	20	2″	-- --	9' 3″	-- --	8'	60°	2	8d	2	8d	5, F11, R6
S366	-- --	20	2″	-- --	11' 3-3/4″	-- --	8'	45°	2	8d	2	8d	
S367	-- --	20	2″	-- --	14' 2″	-- --	10'	45°	2	8d	2	8d	
S360	-- --	16	2″	-- --	10'	-- --	8'	60°	3	8d	2	8d	
S361	-- --	16	2″	-- --	12'	-- --	8'	45°	3	8d	2	8d	

1) These products substitute for code prescribed 1 x 4 let-in bracing.
2) Minimum nail penetration shall be 1-5/16″ for 8d nails and 1-5/8″ for 16d nails.



S360 & S361



S365, S366, & S367

FENCE POST CONNECTORS – SFP & SMP SERIES

Take the work out of fence post installation and repair with the Speedpost, SFP series, and Speedmender, SMP series. The Speedpost is used to install fence posts without digging post holes or pouring concrete. The Speedmender plates act as reinforcement brackets for rotted or damaged fence posts.

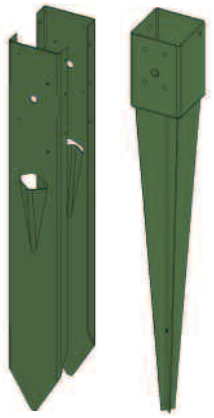
SFP – Available for nominally sized posts only. The SFP30 is for 6′ fence posts.

SMP – Available for nominally-sized posts (SMP) or rough/full size lumber (SMPR).

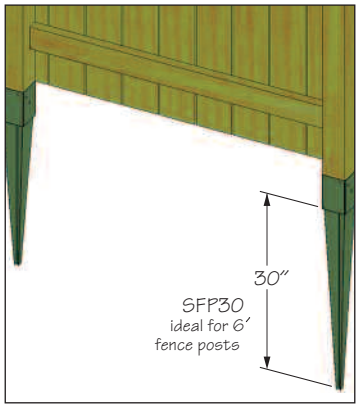
Materials: 13 gauge
Finish: Paint
Patent: #7,152,841

USP Stock No.	Ref. No.	Code Ref.
SFP30	FPBS44	120
SMP	FPBM44	
SMPR	-- --	

Installation:
• Step-by-step installation instructions are labeled onto each product.



SMP ***SFP***



Typical *SFP* installation

STUD SHOES – STS SERIES

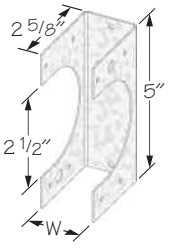
Stud shoes reinforce joists, plates, studs, or rafters which have been drilled or notched during construction.

Materials: 16 gauge
Finish: G90 galvanizing

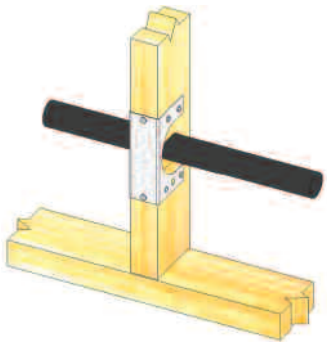
Installation:
• Use all specified fasteners. See Product Notes, page 10.
• STS units are not structurally rated and should not be used as a total member replacement in structural applications.
• For use with 2″ O.D. pipe.

USP Stock No.	Ref. No.	Steel Gauge	Description	Dimension W	Fastener Schedule[1,2] Qty	Fastener Schedule[1,2] Type	Code Ref.
STS1	-- --	16	Single Stud	1-9/16	10	10d x 1-1/2	130
STS2	-- --	16	Double Stud	3-1/16	12	10d	
STS3	-- --	16	Triple Stud	4-9/16	14	10d	

1) 10d x 1-1/2 nails are 9 gauge (0.148″ diameter) and 1-1/2″ long.
2) Minimum nail penetration shall be 1-1/2″ for 10d nails.
3) Maximum hole size = 2″.



STS



Typical *STS1* installation

Miscellaneous

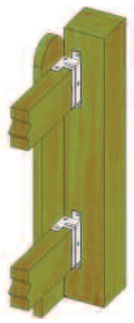
Fence Brackets – ERB24, FB, FC & FRB series

ERB24 – Designed to mount prefabricated fence sections and works with 2x4 horizontal section rails.

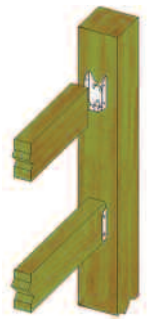
FRB24 – Secures continuous 2x4 rails to wood posts. Prepunched holes allow installers to splice 2x4 rail ends within the bracket.

Materials: See chart
Finish: G-185 galvanizing

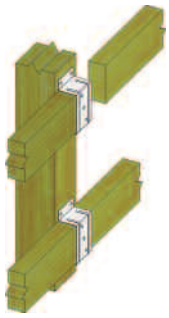
Installation:
• Use all specified fasteners. See Product Notes, page 10.



Typical *ERB24-TZ* installation

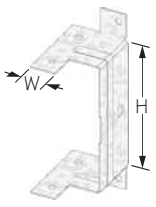


Typical *FC24-TZ* installation



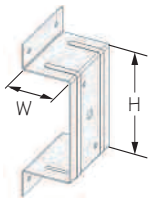
Typical *FRB24-TZ* installation

Rail Size	USP Stock No.	Ref. No	Steel Gauge	Dimensions W	Dimensions H	Code Ref.
2 x 4	ERB24-TZ	-- --	20	1-1/2	3-9/16	120
1 x 4	FB14-TZ	-- --	20	3/4	3-1/2	
1 x 6	FB16-TZ	-- --	20	3/4	5-3/8	
2 x 3	FB23-TZ	-- --	20	1-9/16	2-3/8	
2 x 4	FC24-TZ	FB24Z	20	1-9/16	3-3/8	
2 x 4	FRB24-TZ	-- --	20	1-9/16	3-9/16	

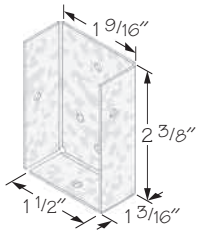


ERB24-TZ

FC24-TZ



FRB24-TZ



FB23-TZ

FB14-TZ & FB16-TZ

Pipe Rail Tie – PRT2

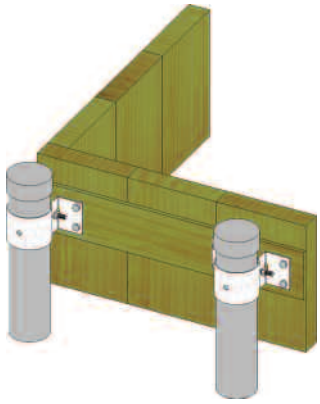
Use the PRT2-TZ to quickly connect 2″ (2 3/8″ outside diameter) vertical pipe posts to wood fence rails.

Materials: 16 gauge
Finish: G-185 galvanizing

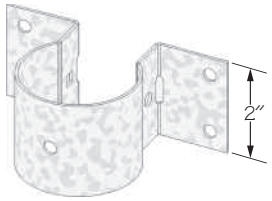
Installation:
• Fasten with (1) 1/4″ carriage bolt and nut (included) for tightening Pipe Rail Tie to pipe and (4) 1/4″ lag bolts for attaching tie to rail.

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[1] Pipe Qty	Pipe Type	Rail Qty	Rail Type	Code Ref.
PRT2	PGT2Z-R	16	1	1/4″ carriage bolt	4	1/4″ lag bolt	120

1) WS15 wood screws can be substituted for specified lag bolts.



Typical *PRT2-TZ* installation



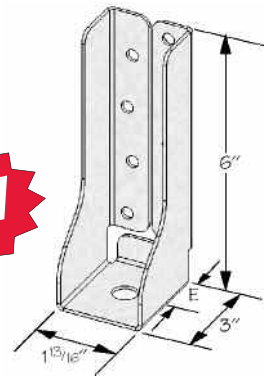
PRT2-TZ

Deck Tie Bracket – DTB-TZ series

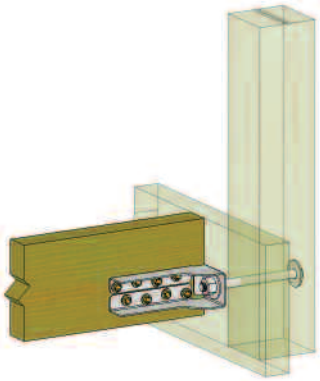
Deck Tie Brackets reinforce the connection of rail posts to a deck. Also provides lateral strength of deck-to-ledger attachment by securing deck to house framing.

Materials: 14 gauge
Finish: G-185 galvanizing

Installation:
- Use all specified fasteners.
- Position DTB-TZ on deck joist in a location where the threaded rod or bolt may be threaded through the bolt hole.
- Drive WS15-GC wood screws into joist.
- Re-install threaded rod or anchor bolt. Secure with washer and nut.
- Tighten anchor bolt nuts finger tight snug to base plus 1⁄3 to 1⁄2 additional turns with wrench. To prevent loosening of the anchor nut during critical loading, use a locking nut or tighten a second nut over the first to lock nuts in place.

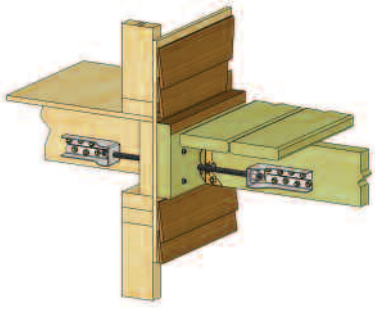


DTB-TZ



Typical *DTB-TZ* installation

The building codes specify that the deck to the house attachment must be designed to resist lateral loads. The lateral load connection shall be permitted to be in accordance with Figure R502.2.2 of the International Residential Building Code. Holdown tension devices shall be provided in not less than two locations per deck, and each device shall have an allowable stress design capacity of not less than 1500 lbs.



Typical *DTB-TZ* Deck to ledger installation

USP Stock No.	Ref. No.	Rod / Bolt Anchor Dia.	E	Fastener Schedule[1]		Allowable Tension (Lbs)				Code Ref.
				Qty	Wood Screws	DF-L / SP		S-P-F		
						100%	160%	100%	160%	
DTB-TZ	DTT2Z	1/2	1-1/4	8	WS15-GC	1840	1890	1505	1590	130

1) WS15-GC Wood Screws are 1/4" dia. x 1-1/2" long and are included with DTB-TZ Deck Tie-Backs.
New products or updated product information are designated in red.

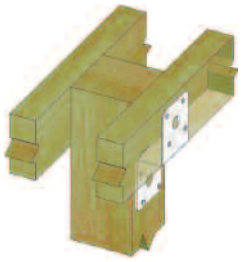
Deck Post Ties – SDJT14 & SDPT series

SDPT – Connects 2 x 4 stair posts and 4 x 4 posts to deck rim joist or stair stringers.

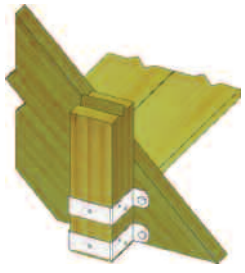
SDJT14 – Secures 2x joists to posts.

Materials: 14 gauge
Finish: G-185 galvanizing

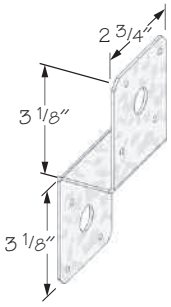
Installation:
- Use all specified fasteners. See Product Notes, page 10.
- SDPT5-TZ & SDPT7-TZ – Install units in pairs on 2x4 (SDPT5-TZ) or 4x4 (SDPT7-TZ) post. Space the connectors 5″ apart from center to center on the post. Use through bolts to fasten connectors to rim joist or stringer. Do not use lag bolts. Fasten to post with specified nails (see chart).
- SDJT14-TZ – Use with 2x lumber for joists (minimum height is 2x4). Install with either specified nails or through bolts. Do not use lag bolts. To ease installation, attach to 4x4 post first.



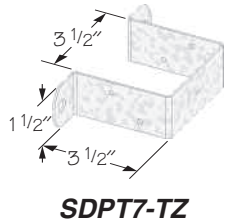
Typical *SDJT14-TZ* installation



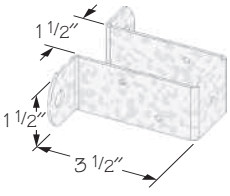
Typical *SDPT7-TZ* installation



SDJT14-TZ



SDPT7-TZ



SDPT5-TZ

Post Size	USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule				Allowable Loads (Lbs.)						Code Ref.
				Nails[1,2]		Bolts[3]		DF-L / SP						
								Nails			Bolts			
				Qty	Type	Qty	Dia.	100%	115%	125%	100%	115%	125%	
2 x 4	SDPT5-TZ	DPT5Z	14	5	10d x 1-1/2	2	3/8	-- --	-- --	-- --	-- --	-- --	-- --	120
4 x 4	SDPT7-TZ	DPT7Z	14	5	10d x 1-1/2	2	3/8	-- --	-- --	-- --	-- --	-- --	-- --	
4 x 4	SDJT14-TZ	DJT14Z	14	8	16d	2	3/8	1120	1290	1400	1400	1400	1400	130

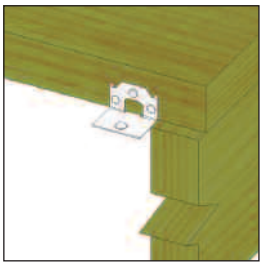
1) 10d x 1-1/2 nails are 9 gauge (0.148″ diameter) by 1-1/2″ long.
2) Nails require a minimum embedment length of 1-5/8″ for 16d nails.
3) Bolts shall conform to ASTM A 307 or better.

Deck Clip – DC50

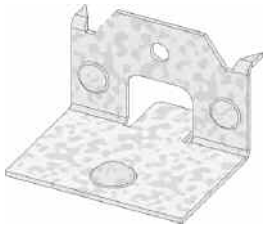
Connects deck boards to joists without face nails or screws. Eliminates rust stains on decks, as well as splintering or wood rot caused by screw or nail "craters". The DC50-TZ works like tongue-in-groove flooring and is easy to install. Raised dimples on the clip provide consistent spacing between deck boards.

Materials: 20 gauge
Finish: G-185 galvanizing

Installation:
- Use all specified fasteners. See Product Notes, page 10.
- Fits 1 1/8″ or thicker decking.
- Fasten the first deck board onto the joists by toenailing up through the joist below into the deck board. Be sure no sharp points protrude above the deck surface. For subsequent deck board rows, nail DC50-TZs onto the deck board edge, positioned 2″ from each joist. Slide the deck board along the joist until the DC50-TZ "lip" is under the previously laid deck board. Toenail the deck board's exposed edge to the joist. Repeat until decking is completed. The last deck board will require toenailing up from below to secure the outside edge.



Typical *DC50-TZ* installation



DC50-TZ

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[1,2]		Code Ref.
			Qty	Type	
DC50-TZ	DBT1Z	20	1	8d x 1-1/2	120

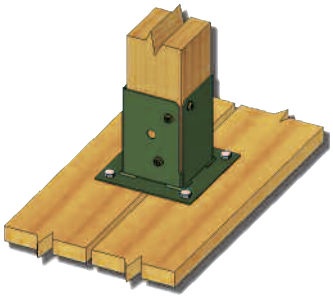
1) 8d x 1-1/2 nails are 11 gauge (0.131″ diameter) by 1-1/2″ long.
2) Use with 1-1/8″ minimum thickness decking.

Bolt Down – BD

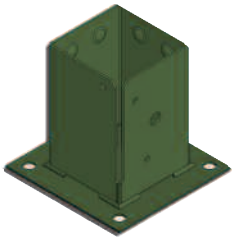
Materials: 13 gauge
Finish: paint
Patents: #7,152,841

Installation:
- Use all specified fasteners. See Product Notes, page 10.

Post Size	USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule	
				Qty	Lag Bolts
4 x 4	BD	FPBB44	13	3	1/4" x 1-1/2"



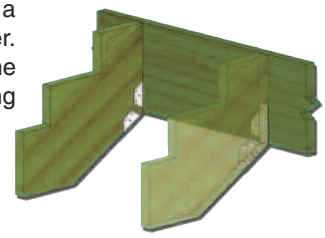
Typical *BD* installation



BD

Concealed Stringer Hanger – CSH-TZ

The CSH-TZ concealed stringer hanger provides a method of connecting a stair stringer with a hidden hanger. The seat of the hanger is adjustable to match the slope of the stair stringer. The reversible design allows the connector to be used on the left, right, or interior stringers. The CSH-TZ may be used with USP's SCA Stair Angles for a complete, easy-to-use stair framing solution.



Typical *CSH*-TZ installation

Materials: 18 gauge
Finish: G-185 galvanizing
Patents: Pending

IMPROVED DESIGN

Installation:
- Use all specified fasteners as indicated.
- Bend angle only once.

Steps:
1. Attach CSH-TZ to header with tabs positioned towards the inside of the stringer member.
2. Adjust the seat of the CSH-TZ?to match the slope of the stringer member. Diamond shaped holes in the connector allow temporary installation of woodscrews to aid in installation of the CSH-TZ.
3. Install 10d x 1 1/2? nails into the stringer and header members

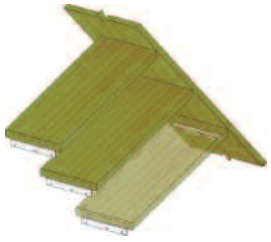
CSH-TZ

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[2]				Allowable Loads (Lbs.)								Code Ref.
			Header		Joist		DF-L / SP				S-P-F / Hem Fir				
			Qty	Type	Qty	Type	100%	115%	125%	Uplift[1] 160%	100%	115%	125%	Uplift[1] 160%	
CSH-TZ	-- --	18	8	10d x 1-1/2	5	10d x 1-1/2	890	890	890	390	745	745	745	310	130

1) Uplift loads are increased 60% for wind or seismic loads; no further increase shall be permitted.
2) 10d x 1-1/2 nails are 9 gauge (0.148″ diameter) by 1-1/2″ long.
New products or updated product information are designated in red.

Stair Angles – SCA series

Stair angles simplify stair construction. There is no need to calculate and notch stair stringers. Stronger and safer than wood blocking, and the angle and fasteners are hidden from view.

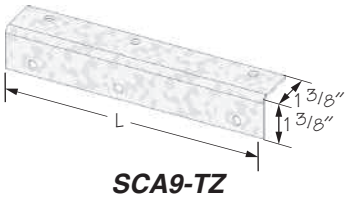


Typical *SCA9-TZ* installation

Materials: 12 gauge
Finish: G-185 galvanizing; SCA9-GC & SCA10-GC – Gold Coat
Codes: ESR-1280, L.A. City RR 25749, FL11664

AVAILABLE IN GOLD COAT

Installation:
- Use all specified fasteners. See Product Notes, page 10.
- Use the SCA9-TZ for single 2x10 stair treads. Use the SCA10-TZ for double 2 x 6 stair treads.
- To calculate stair construction do the following:
  1. Find the number of steps needed by taking the vertical drop from the deck surface to grade. Divide by 7. Round off to the nearest whole number. (**Ex:** Vertical drop of 39″ divided by 7 equals 5.57″ rounded off is 6″)
  2. Find the step rise by dividing the vertical drop by the number of steps (39″ divided by 6 = 6.5″)
  3. Find the step run by measuring the depth of your treadboard (**Ex:** (2) 2x6s have a run of 11¼″)
  4. Find the stairway span by multiplying the run by the number oftreads minus one (**Ex:** 11¼″ x 5 = 56¼″)
- Using the above calculations, mark stair angle locations on each stringer. Attach a stair angle to the inside of each stringer at the marked locations. Attach stringers to deck rim joist and railing posts. Position treadboards on angles and fasten from below.



SCA9-TZ

Typical *SCA10-TZ* installation

USP Stock No.	Ref. No.	Steel Gauge	L	Fastener Schedule[2]		Allowable Download (Lbs.)[1]	Code Ref.
				Qty	Type	DF-L / SP 100%	
SCA9-TZ	TA9Z	12	9	6	1/4″ x 1-1/2" Lag Screws	335	2, F20, R12
SCA9-GC	-- --			6	WS15-GC		
SCA10-TZ	TA10Z	12	10	8	1/4″ x 1-1/2" Lag Screws	450	
SCA10-GC	-- --			8	WS15-GC		

1) Loads assume rise over run of 7/11.
2) WS15-GC Wood Screws are 1/4″ x 3″ long.

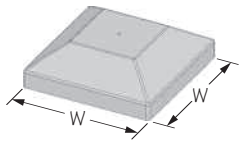
Plastic Post Caps – PCP series

These seamless caps keep water off post tops, protecting wood from moisture damage. The PCP's plastic construction is corrosion-proof and paintable. Not available in rough or full lumber sizes.

Materials: Hi-impact plastic
Finish: Gray

Installation:
• Fasten cap to post top with (1) 8d HDG or 10d HDG nail.
• See Product Notes, page 10.

Typical *PCP44* installation



PCP66

Post / Column Size[1]	USP Stock No.	Ref. No.	Dimension W	Color	Code Ref.
4 x 4	PCP44	-- --	3-5/8	Gray	120
6 x 6	PCP66	-- --	5-5/8	Gray	

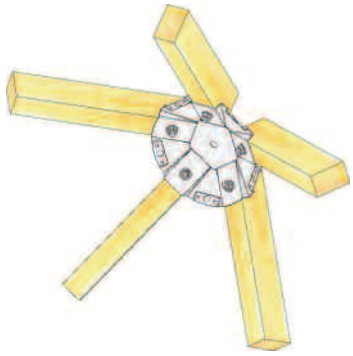
1) Not available in rough or full lumber sizes.

Gazebo Hub Plates – CH series

Gazebo hub plates join rafters at gazebo roof peaks. The CH plate eliminates the need for complicated plumb cuts. Simply square cut 2x2, 2x3, or 2x4 rafters and bolt.

Materials: 16 gauge
Finish: G90 galvanizing

Installation:
• Use 5/16″ carriage bolts to fasten CH plate to 2x rafters. See Product Notes, page 10.
• Hub plates can not be modified.



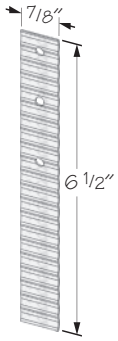
Typical *CH* installation

USP Stock No.	Ref. No.	Steel Gauge	Description	Roof Pitches	Code Ref.
CH5	-- --	16	5 sided	4/12	120

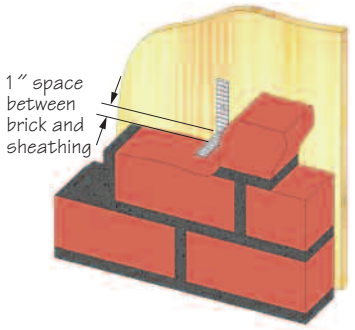
CH5

Materials: 22 gauge
Finish: G90 galvanizing

Installation:
- Use nails appropriate for intended use. See Product Notes, page 10.
- The opposite end must be bonded in the mortar joint of brick facade.
- Check local codes for spacing requirements.
- Wall tie shall be bent at nail, bonding into mortar joint.



WT22



Typical *WT* installation

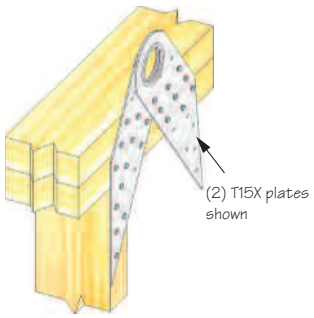
USP Stock No.	Ref. No.	Description	Steel Gauge	Dimensions W	Dimensions L	Code Ref.
WT22	BTB	Straight Edge - Duplex	22	7/8	6-1/2	120

Hoist Plates – T series

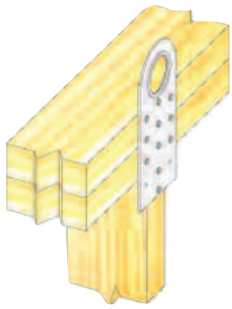
Engineered with a reinforced collar around the hoist hole for added strength.

Materials: See chart

Installation:
- Fill all nail holes that align with wood.



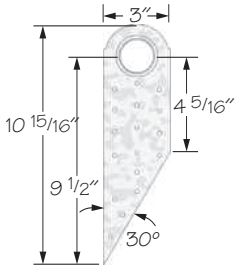
Typical *T15X* installation



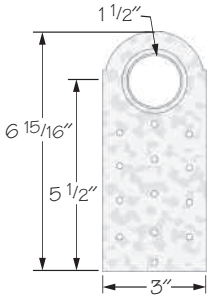
Typical *T10/T11* installation

USP Stock No.	Ref. No.	Steel Gauge	Minimum Fastener Schedule[1] Qty	Minimum Fastener Schedule[1] Type	Max Load (Lbs.)	Code Ref.
T10	-- --	14	10	8d common	800	130
T11	-- --	12	10	8d common	800	
T15X	-- --	14	10	8d common	800	

1) Minimum nail penetration shall be 1-5/16″ for 8d nails.



T15X



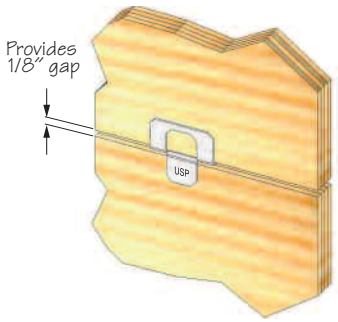
T10/T11

Plywood Clips – PC series

PC – Steel plywood clips. All models feature embossed dimples to provide 1/8″ gap.

Materials: 20 gauge
Finish: G90 galvanizing

PC



Typical *PC* installation

Span Rating[1]	USP Stock No.	Ref. No.	Steel Gauge	Maximum Span[1]		Plywood Thickness (Inches)	PC's Per Span	Code Ref.
				With PC	Without PC			
24	PC38	PSCL 3/8	20	24	20	3/8	1	120
24	PC716	PSCL 7/16	20	24	24	7/16	1	
32	PC1532	PSCL 15/32	20	32	28	15/32	1	
32	PC12	PSCL 1/2	20	32	28	1/2	1	
40	PC1932	PSCL 19/32	20	40	32	19/32	2	
40	PC58	PSCL 5/8	20	40	32	5/8	2	
48	PC34	PSCL 3/4	20	48	36	3/4	2	

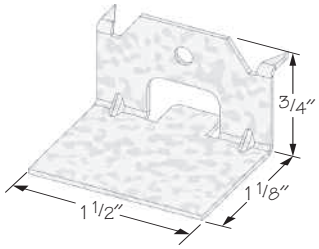
1) Based on code specified allowable spans for panel sheathing continuous over two or more spans with plywood strength axis perpendicular to supports.
2) Applicable to roof sheathing.
3) Applies to panels 24″ or wider.
4) Uniform load deflection limitations 1/180 of span under live load plus dead load or 1/240 under live load only.

Drywall Clip – DC1

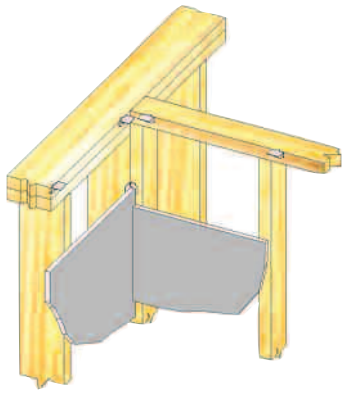
Drywall clips or “stops” help support drywall or wood paneling and reduce wood blocking on top plates, end walls, and corners.

Materials: 20 gauge
Finish: G90 galvanizing

Installation:
• Use 8d nails to install DC1, 16″ on-center or less.



DC1



Typical *DC1* installation

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule[1]		Code Ref.
			Qty	Type	
DC1	DS	20	1	8d	120

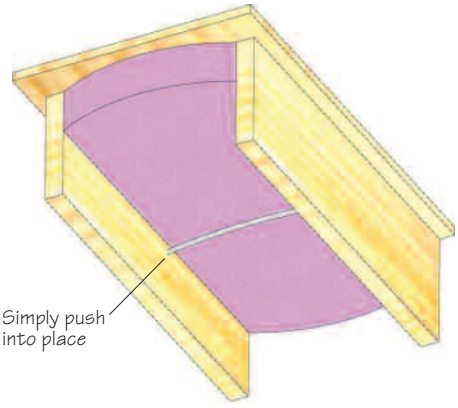
1) Minimum nail penetration shall be 1-5/16″ for 8d nails.

Insulation Supports – IS series

Insulation supports secure batt-type insulation in place between joists. Chisel-cut ends dig into joists for permanent holding. Easy to install in hard-to-reach crawl spaces.

Materials: 13 gauge carbon steel wire
Finish: None

Installation:
• Use IS16 for joist spaced 16″ O.C. and IS24 for 24″ O.C. spacing.
• Position insulation batt in place between joists. Hold IS unit at the center and push into place.
• Wear gloves and safety glasses during installation.



Typical *IS* installation

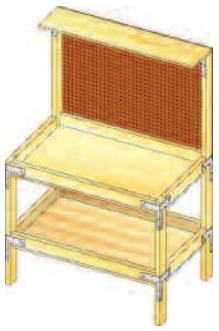
USP Stock No.	Ref. No.	Steel Gauge	Joist Spacing	Dimensions	Code Ref.
				Overall Length	
IS16	IS16	13	16″ O. C.	15-1/2″	120
IS24	IS24	13	24″ O. C.	23-1/2″	

Corner Tie – KSCT68

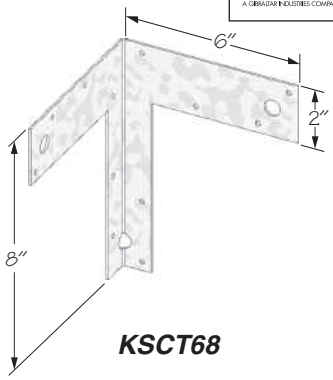
The Corner Tie secures three-way wood-to-wood connections. Handy for building workbenches, utility tables, or shelving using 2x4 lumber.

Materials: 14 gauge
Finish: G90 galvanizing

Installation:
• Use (12) #10 panhead screws to fasten the KSCT68 to wood framing.



Typical *KSCT68* installation



KSCT68

Mending Plates – NP & NPA series

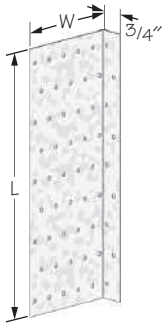
NP – Flat, nail-on plates.

NPA – Flanged, nail-on plates.

Materials: 20 gauge
Finish: G90 galvanizing

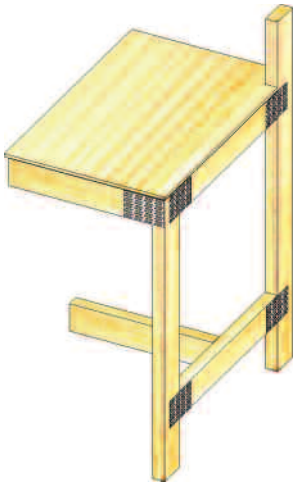
Installation:
• Use nails appropriate for intended use. Holes are sized for 8d common or 8d x 1½″ nails.
• The designer shall determine appropriate load values.

USP Stock No.	Ref. No.	Steel Gauge	Dimensions W	Dimensions L	Number of Nail Holes	Code Ref.
NP15	TP15	20	1-13/16	5	12	
NP35	TP35	20	3-1/8	5	22	
NP37	TP37	20	3-1/8	7	31	
NP39	TP39	20	3-1/8	9	40	
NP311	TP311	20	3-1/8	11	49	
NP45	TP45	20	4-1/8	5	30	
NP47	TP47	20	4-1/8	7	42	
NP49	TP49	20	4-1/8	9	54	
NP411	TP411	20	4-1/8	11	66	120
NP413	-- --	20	4-1/8	13	78	
NP57	TP57	20	5-3/4	7	59	
NP415	-- --	20	4-1/8	15	90	
NPA37	TPA37	20	3-3/8	7	42	
NPA39	TPA39	20	3-3/8	9	54	
NPA311	-- --	20	3-3/8	11	66	
NPA57	TPA57	20	5	7	59	
NPA59	-- --	20	5	9	76	



NPA

NP



Typical Mending Plate installation

Mending Plates – PRPL & TPP series

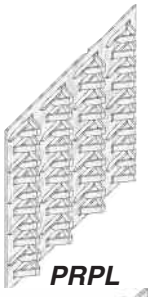
TPP – Prong plates with straight prongs.

PRPL – Prong plates with angled, hammer-in prongs.

Materials: See chart
Finish: G90 galvanizing

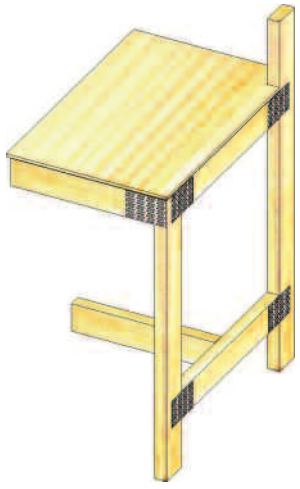
Installation:
• These products are not intended for structural use. No load ratings are assigned. These plates are not intended for use in truss assembly.

USP Stock No.	Ref. No.	Steel Gauge	Dimensions W	Dimensions L	Code Ref.
PRPL1	-- --	20	1-11/16	4-15/16	
PRPL2	-- --	20	1-11/16	7-3/8	
PRPL3	-- --	20	3-3/8	4-15/16	
PRPL4	-- --	20	3-3/8	7-3/8	120
TPP14	MP14	22	13/16	3-1/2	
TPP24	MP24	22	1-11/16	3-1/2	
TPP36	MP36	22	2-3/4	5-1/4	
TPP58	-- --	22	4-3/16	7-13/16	



PRPL

TPP



Typical Mending Plate installation

Miscellaneous