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Reference numbers shown throughout the charts in this catalog are part numbers which may be more familiar to customers in various regions of the United States. These are included for the convenience of our new customers who have recently switched from a competitor's product line to USP.

The reference numbers in this catalog are for general application comparison only and should not be used as a substitution tool. The user is responsible to compare specific load values, fastener schedules, material specifications, and other factors to determine suitability of use for any particular product.

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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.

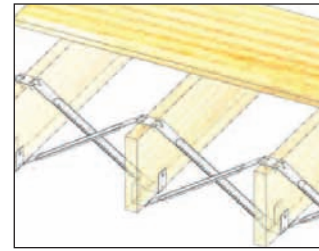
Materials: See chart

Finish: G90 galvanizing

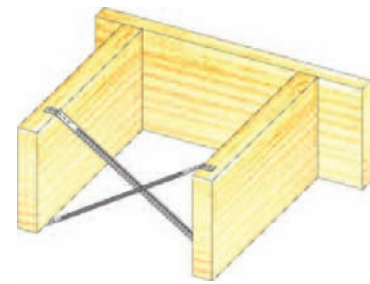
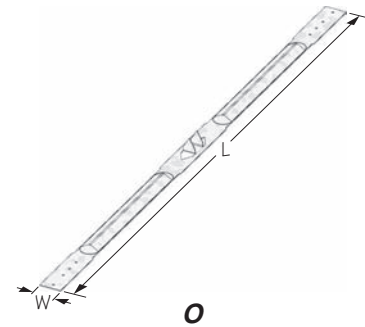
Codes: NER 505, FL816, L.A. City RR 25303

Installation:

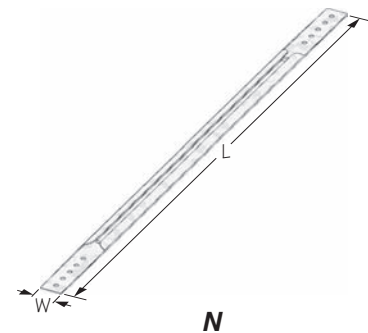
- Use specified fasteners in models with fastener requirements.
- For all models – Bridging should be installed on floor joists with a nominal depth-to-thickness ratio of 5 to 6 or more (2001 National Design Specification for Wood Construction; Section 4.4). Bridging units should be installed in pairs 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 1 1/2" nails at each end. Fully seat nails to avoid any movement against the bridging and subsequent floor noise.



Typical O installation



Typical N installation



USP Stock No.	Ref. No.	Steel Gauge	Dimensions		Fastener Schedule ¹	Joist Spacing O.C.
			W	L		
N16	LTB20	22	3/4	19-3/4	(4) 8d x 1-1/2	16
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	---
O40	LTB40	22	3/4	39-3/4	(4) 8d x 1-1/2	16

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.

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/O40	---	---	---	---	---	---	---
9-1/4	N16	N16/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.



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.

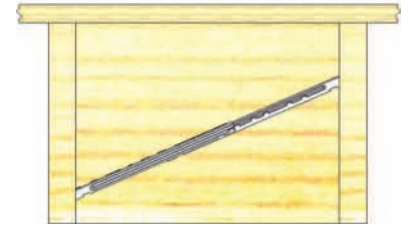
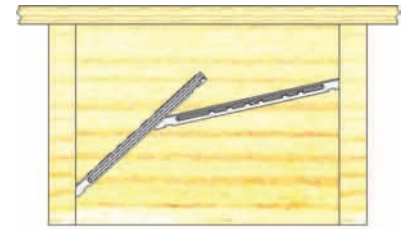
Materials: See chart

Finish: G90 galvanizing

Codes: NER 505, ICBO 5125, FL816,
L.A. City RR 25303 & RR 25332

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 1 1/2" 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.



Typical MB16 installation



MB16



BRN



G & MBG

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

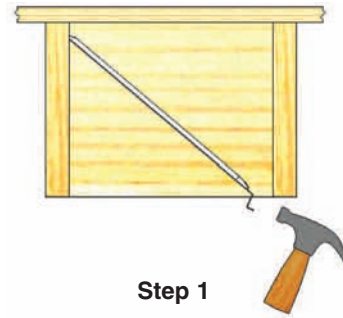
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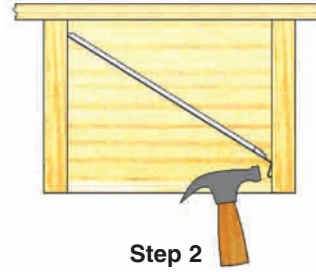
Miscellaneous

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

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.



Step 1



Step 2

Typical G & MBG installation

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PROTECTION PLATES – ICPL SERIES, ID4, KNS1, & PL4

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

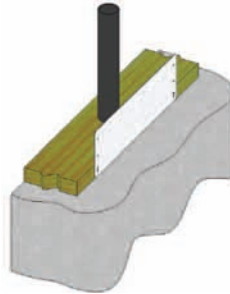
ICPL58 & ID4 – Installs with nails.

KNS1 & PL4 – Prongs allow for quick installation.

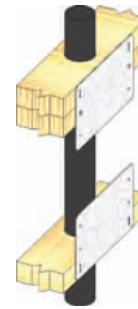
Materials: 16 gauge

Finish: ICPL516-TZ – G-185 galvanizing;
All other – Galvanized

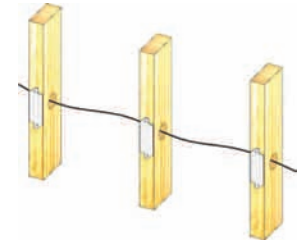
Options: ICPL58 is available in Triple Zinc.
To order, add TZ, to stock number, as in ICPL58-TZ.



Typical ICPL516-TZ installation



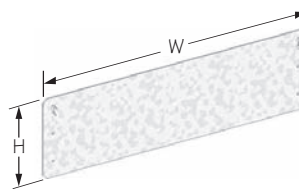
Typical ICPL58 installation



Typical ID4, KNS1, & PL4 installation

Installation:

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



ICPL516-TZ



ICPL58



ID4



KNS1



PL4

USP Stock No.	Ref. No.	Steel Thickness	Dimensions		Fastener Schedule ¹
			W	H	
ICPL58	PSPN58	1/16	8-1/16	5	(4) 8d or prongs
ID4	---	1/16	1-3/8	4-1/4	(2) 8d
PL4	NS2	1/16	2	5	prongs
KNS1	NS1	1/16	1-1/2	3	prongs

USP Stock No.	Ref. No.	Steel Thickness	Dimensions		Installation Type	Fastener Schedule ²	Allowable Loads ¹			
			W	H			DF-L / SP		S-P-F	
							133%	160%	133%	160%
ICPL516-TZ	PSPN516Z	1/16	16-1/4	5	Sill Plate	(12) 16d + prongs	1130	1355	970	1160
					Double Top Plate	(16) 16d + prongs	1505	1805	1290	1550

1) Allowable loads have been increased 33-1/3% or 60% for wind or seismic loads; no further increase shall be permitted.
2) Minimum nail penetration shall be 1-5/8" for 16d nails.

Miscellaneous

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: NER 530 & NER 505, FL816, FL822,
L.A. City RR 25337 & RR 25303

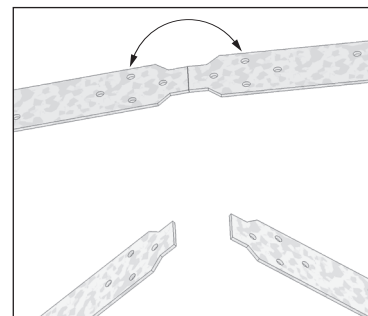
Installation:

- Use all specified fasteners. See Product Notes, page 16.
- 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.

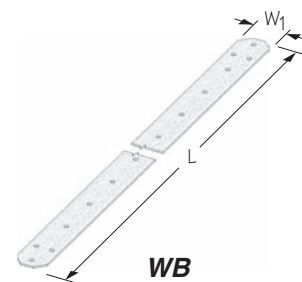
Steps: Square the panel. Straighten any kinks in bracing caused by handling. Lay the bracing on the panel with 3" overhanging both the top and bottom plate. Secure the bracing to each stud with an 8d nail. Wrap ends around the top and bottom plates and nail in place to each plate (3) 8d nails: (2) 8d 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.**



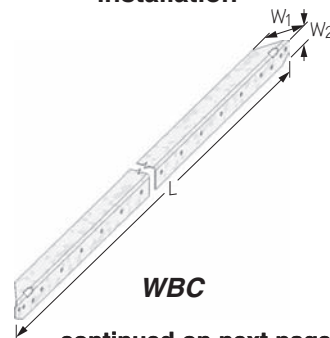
RWB pre-embossed snap-off points



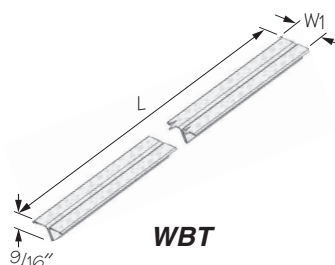
Typical RWB, WB installation



Typical WBC/WBT installation



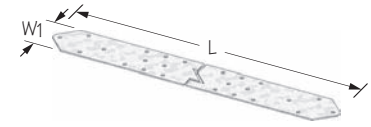
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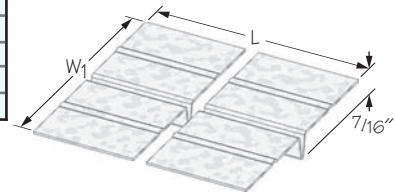
WBT

WBC

USP Stock No. ¹	Ref. No.	Steel Gauge	Dimensions			Pieces Per Roll	Wall Height	Install Angle	Fastener Schedule ⁴		Max Load ^{2,3} (Lbs.)
			W1	W2	L				Each Plate	Each Stud	
RWB96	WB106C	16	1-1/4"	---	9' 6"	15	8'	60°	(4) 8d	(1) 8d	374
RWB114	WB126C	16	1-1/4"	---	11' 4-3/8"	12	8'	45°	(4) 8d	(1) 8d	664
RWB143	WB143C	16	1-1/4"	---	14' 3"	10	10'	45°	(4) 8d	(1) 8d	664
WBC10	CWB106	18	7/8"	1"	9' 5-3/4"	---	8'	60°	(2) 16d	(1) 8d	268
WBC12	CWB126	18	7/8"	1"	11' 4-3/8"	---	8'	45°	(2) 16d	(1) 8d	380
WBT10	TWB10	22	1-3/8"	---	9' 3"	---	8'	60°	(4) 8d	(1) 8d	291
WBT12	TWB12	22	1-3/8"	---	11' 4"	---	8'	45°	(4) 8d	(1) 8d	511
WBT14	TWB14	22	1-3/8"	---	14' 2"	---	10'	45°	(4) 8d	(1) 8d	511
WB106	WB106	16	1-1/4"	---	9' 5-1/2"	---	8'	60°	(3) 16d	(1) 8d	454
WB126	WB126	16	1-1/4"	---	11' 4-1/4"	---	8'	45°	(3) 16d	(1) 8d	876
S365	---	20	2"	---	9' 3"	---	8'	60°	(2) 8d	(2) 8d	438
S366	---	20	2"	---	11' 3-3/4"	---	8'	45°	(2) 8d	(2) 8d	686
S367	---	20	2"	---	14' 2"	---	10'	45°	(2) 8d	(2) 8d	708
S360	---	16	2"	---	10'	---	8'	60°	(3) 8d	(2) 8d	235
S361	---	16	2"	---	12'	---	8'	45°	(3) 8d	(2) 8d	675



S360 & S361



S365, S366, & S367

- 1) These products substitute for code prescribed 1 x 4 let-in bracing.
- 2) Max Load is the maximum load vector applied at the top of the stud wall section, not to exceed 25' in length, resisted by the combination of wall brace straps installed.
- 3) The allowable loads are based on lumber with a specific gravity of 0.50, and a moisture content of 19% or less.
- 4) Minimum nail penetration shall be 1-5/16" for 8d nails and 1-5/8" for 16d nails.

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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.

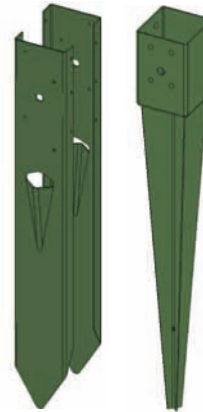
SFP – Available for nominally sized posts only. Use the SFP24 for fence posts up to 4' tall. The SFP30 is for 6' fence posts.

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

Materials: 13 gauge
Finish: Paint
Patent: #7,134,636

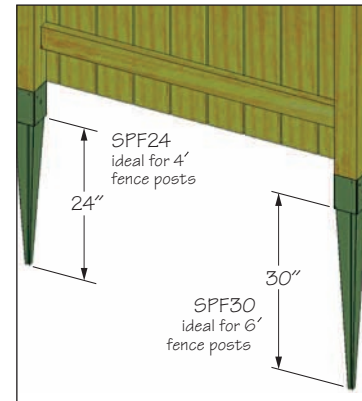
Installation:

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



SMP

SFP



Typical SFP installation

Miscellaneous

STUD SHOES – STS SERIES

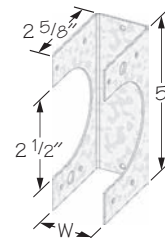
Stud shoes reinforce joists, plates, studs, or rafters which have been drilled or notched during construction.

Materials: 16 gauge
Finish: G90 galvanizing

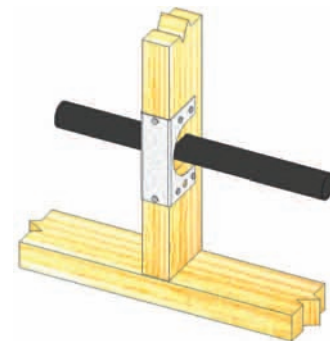
Installation:

- Use all specified fasteners. See Product Notes, page 16.
- 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	Fastener Schedule ^{1,2}
				W	
STS1	---	16	Single Stud	1-9/16	(10) 10d x 1-1/2
STS2	---	16	Double Stud	3-1/16	(12) 10d
STS3	---	16	Triple Stud	4-9/16	(14) 10d



STS



Typical STS1 installation

- 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".

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.

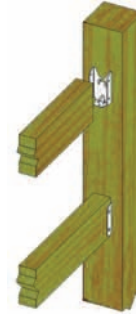
Materials: See chart
Finish: G-185 galvanizing

Installation:

- Use all specified fasteners. See Product Notes, page 16.



Typical **ERB24-TZ** installation



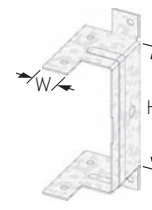
Typical **FB240-TZ** installation



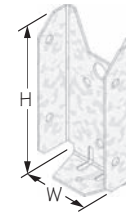
Typical **FRB24-TZ** installation

Rail Size	USP Stock No.	Ref. No	Steel Gauge	Dimensions		Fastener Schedule ^{1,2,3}	
				W	H	Rail	Post
2 x 4	ERB24-TZ	---	20	1-1/2	3-9/16	(4) 8d	(3) 8d
1 x 4	FB14-TZ	---	20	3/4	3-1/2	(3) 8d x 3/4	(2) 8d x 1-1/2
1 x 6	FB16-TZ	---	20	3/4	5-3/8	(5) 8d x 3/4	(3) 8d X 1-1/2
2 x 3	FB23-TZ	---	20	1-9/16	2-3/8	(3) 8d x 1-1/2	(4) 8d x 1-1/2
2 x 4	FB240-TZ	FB24Z	20	1-9/16	3-3/8	(5) 6d	(3) 8d
2 x 4	FRB24-TZ	---	20	1-9/16	3-9/16	(2) 10d x 1-1/2	(4) 10d

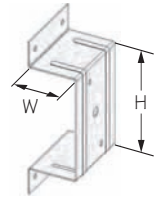
- 1) Minimum nail penetration shall be 1-1/8" for 6d nails, 1-5/16" for 8d nails, and 1-1/2" for 10d nails.
- 2) 8d x 1-1/2 nails are 11 gauge (0.131" diameter) by 1-1/2" long.
- 3) 10d x 1-1/2 nails are 9 gauge (0.148" diameter) by 1-1/2" long.



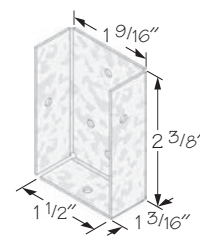
ERB24-TZ



FB240-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.

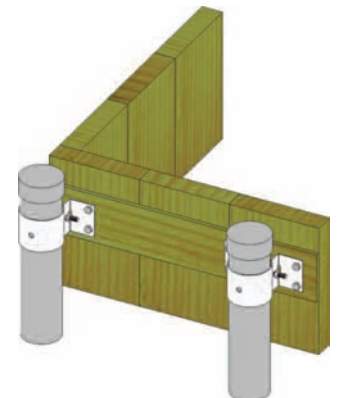
Materials: 16 gauge
Finish: G-185 galvanizing

Installation:

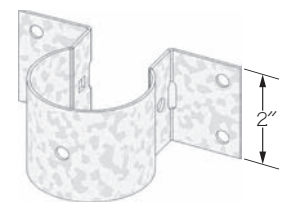
- Fasten with (1) 1/4" carriage bolt and nut (included) for tightening Pipe Rail Tie to pipe and (4) 1/4" lag bolts for attaching tie to rail.

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ¹	
			Pipe	Rail
PRT2-TZ	PGT2Z-R	16	(1) 1/4" carriage bolt	(4) 1/4" lag bolt

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



Typical **PRT2-TZ** installation



PRT2-TZ

Miscellaneous

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:

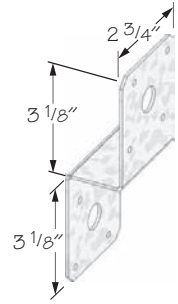
- Use all specified fasteners. See Product Notes, page 16.
- **SDPT5-TZ** & **SDPT7-TZ** – Install units in pairs on 2x4 (SDPT5-TZ) or 4x4 (SDPT7-TZ) post. Space the connectors 5" apart from center to center on the post. Use through bolts to fasten connectors to rim joist or stringer. Do not use lag 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.



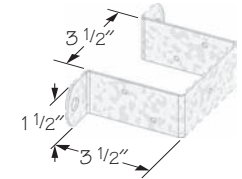
Typical **SDJT14-TZ** installation



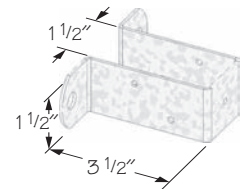
Typical **SDPT7-TZ** installation



SDJT14-TZ



SDPT7-TZ



SDPT5-TZ

Post Size	USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule		Allowable Loads (Lbs.)					
				Nails ^{1,2}	Bolts ³	DF-L / SP					
						Nails			Bolts		
100%	115%	125%	100%	115%	125%						
2 x 4	SDPT5-TZ	DPT5Z	14	(5) 10d x 1-1/2	(2) 3/8	---	---	---	---	---	---
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) 5/8	1120	1290	1400	1400	1400	1400

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.

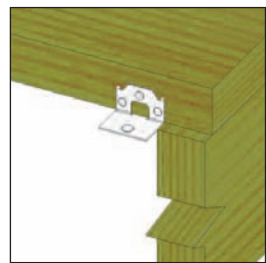
DECK CLIP – DC50

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.

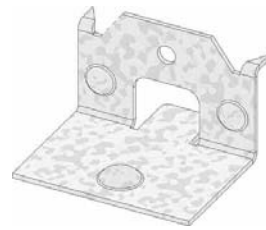
Materials: 20 gauge
Finish: G-185 galvanizing

Installation:

- Use all specified fasteners. See Product Notes, page 16.
- 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}
DC50-TZ	DBT1Z	20	(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) Use with 1-1/8" minimum thickness decking.

Miscellaneous

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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.

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

Installation:

- Use all specified fasteners. See Product Notes, page 16.
- Attach CSH to header with tab positioning towards and inside of the stringer member, adjust seat slope to stringer pitch, and fasten CSH to stringer member.

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ²		Allowable Loads (Lbs.)									
			Header	Joist	DF-L / SP				S-P-F / Hem Fir					
					100%	115%	125%	133%	160%	100%	115%	125%	133%	160%
CSH-TZ	--	18	(8) 10d x 1-1/2	(4) 10d x 1-1/2	895	1030	1045	485	485	775	890	900	420	420

1) Uplift loads are increased 33-1/3% or 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.

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.

- Materials:** 12 gauge
- Finish:** G-185 galvanizing; SCA9-GC & SCA10-GC – Gold Coat
- Codes:** ICBO 2039, L.A. City RR 23888



Installation:

- Use all specified fasteners. See Product Notes, page 16.
- 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 11 1/4")
 4. Find the stairway span by multiplying the run by the number of treads minus one (Ex: 11 1/4" x 5 = 56 1/4")
- 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.

USP Stock No.	Ref. No.	Steel Gauge	L	Fastener Schedule ²	Allowable Download (Lbs.) ¹
					DF-L / SP
SCA9-TZ	TA9Z	12	9	(6) 1/4" Lag Bolts	335
SCA9-GC	--			(6) WS15-GC	
SCA10-TZ	TA10Z	12	10	(8) 1/4" Lag Bolts	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.
 New products or updated product information are designated in red.

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:

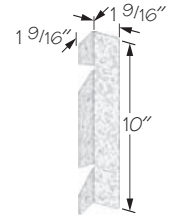
- Fasten cap to post top with
- (1) 8d HDG or 10d HDG nail.
- See Product Notes, page 16.

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

1) Not available in rough or full lumber sizes.



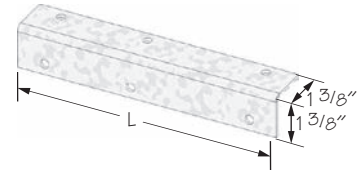
Typical CSH-TZ installation



CSH-TZ (right shown)



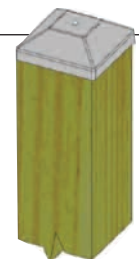
Typical SCA9-TZ installation



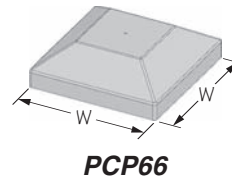
SCA9-TZ



Typical SCA10-TZ installation



Typical PCP44 installation



PCP66

Miscellaneous

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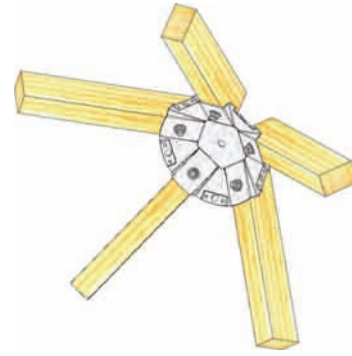
Gazebo hub plates join rafters at gazebo roof peaks. The CH plate eliminates the need for complicated plumb cuts. Simply square cut 2x2, 2x3, or 2x4 rafters and bolt.

Materials: 16 gauge
Finish: G90 galvanizing

Installation:

- Use 5/16" carriage bolts to fasten CH plate to 2x rafters. See Product Notes, page 16.
- Hub plates can not be modified.

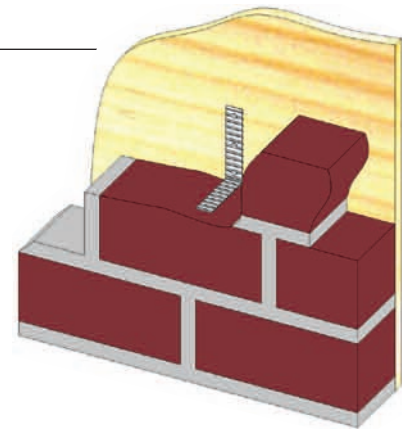
USP Stock No.	Ref. No.	Steel Gauge	Description	Roof Pitches
CH5	-- --	16	5 sided	4/12



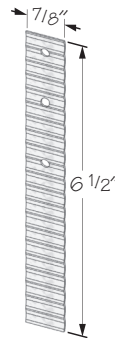
Typical CH installation



CH5



Typical WT22 installation



WT22

WALL TIES – WT22

WT – Straight edge design.

Materials: 22 gauge
Finish: G90 galvanizing

Installation:

- Use all specified fasteners. See Product Notes, page 16.
- 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.

USP Stock No.	Ref. No.	Description	Steel Gauge	Dimensions		Fastener Schedule ¹
				W	L	
WT22	BTB	Straight Edge - Duplex	22	7/8	6-1/2	(1) 10d

¹) Minimum nail penetration shall be 1-1/2" for 10d nails.

HOIST PLATES – T SERIES

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

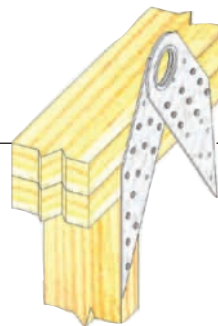
Materials: See chart

Installation:

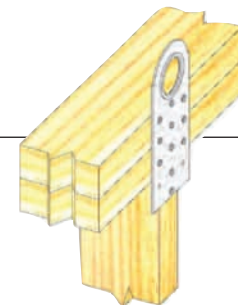
- Fill all nail holes that align with wood.

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

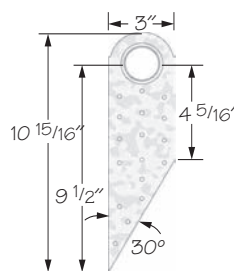
¹) Minimum nail penetration shall be 1-5/16" for 8d nails.



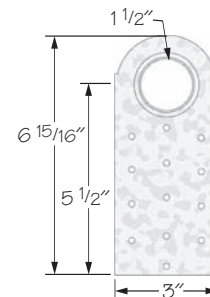
Typical T15X installation



Typical T10/T11 installation



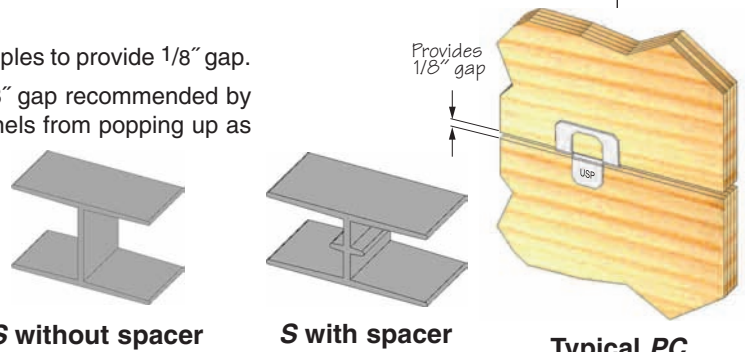
T15X



T10/T11

PC – Steel plywood clips. All models feature embossed dimples to provide 1/8" gap.
S – Extruded aluminum alloy. Spacer tabs provide the 1/8" gap recommended by the American Plywood Association, needed to prevent panels from popping up as sheathing expands.

Materials: PC – 20 gauge
 S – Aluminum alloy
Finish: G90 galvanizing
 (PC series only)

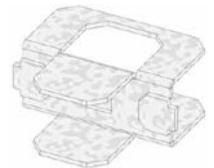


Span Rating ¹	USP Stock No.	Ref. No.	Steel Gauge	Maximum Span ¹		Plywood Thickness (Inches)	PC's Per Span
				With PC	Without PC		
24	PC38	PSCL 3/8	20	24	20	3/8	1
24	PC716	PSCL 7/16	20	24	24	7/16	1
32	PC1532	PSCL 15/32	20	32	28	15/32	1
32	PC12	PSCL 1/2	20	32	28	1/2	1
40	PC1932	PSCL 19/32	20	40	32	19/32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

USP Stock No.	Ref. No.	Plywood Thickness (Inches)
*S54	---	7/16
*S46	---	15/32
*S56	---	1/2
S57	---	5/8
S58	---	3/4

*With spacer

Typical PC installation



PC

- 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 – DC 1

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

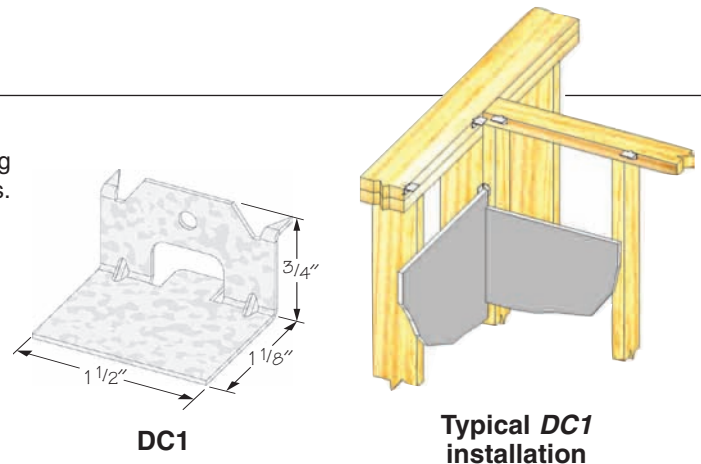
Materials: 20 gauge
Finish: G90 galvanizing

Installation:

- Use 8d nails to install DC1, 16" on-center or less.

USP Stock No.	Ref. No.	Steel Gauge	Fastener Schedule ¹
DC1	DS	20	(1) 8d

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



Typical DC1 installation

INSULATION SUPPORTS – IS SERIES

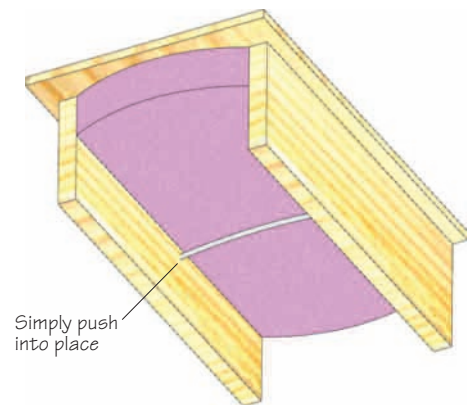
Insulation supports secure batt-type insulation in place between joists. Chisel-cut ends dig into joists for permanent holding. Easy to install in hard-to-reach crawl spaces.

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.

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



Typical IS installation

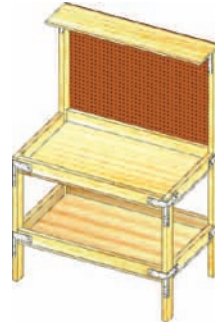
Miscellaneous

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

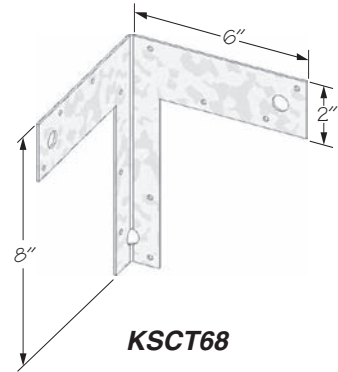
Materials: 14 gauge
Finish: G90 galvanizing

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.

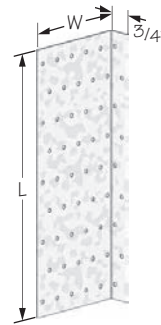
NPA – Flanged, nail-on plates.

Materials: 20 gauge
Finish: G90 galvanizing

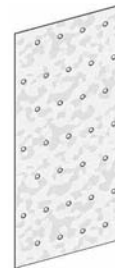
Installation:

- Use nails appropriate for intended use. Holes are sized for 8d common or 8d x 1 1/2" nails.
- The designer shall determine appropriate load values.

USP Stock No.	Ref. No.	Steel Gauge	Dimensions		Number of Nail Holes
			W	L	
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
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

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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

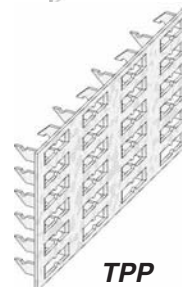
Installation:

- **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	L
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
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