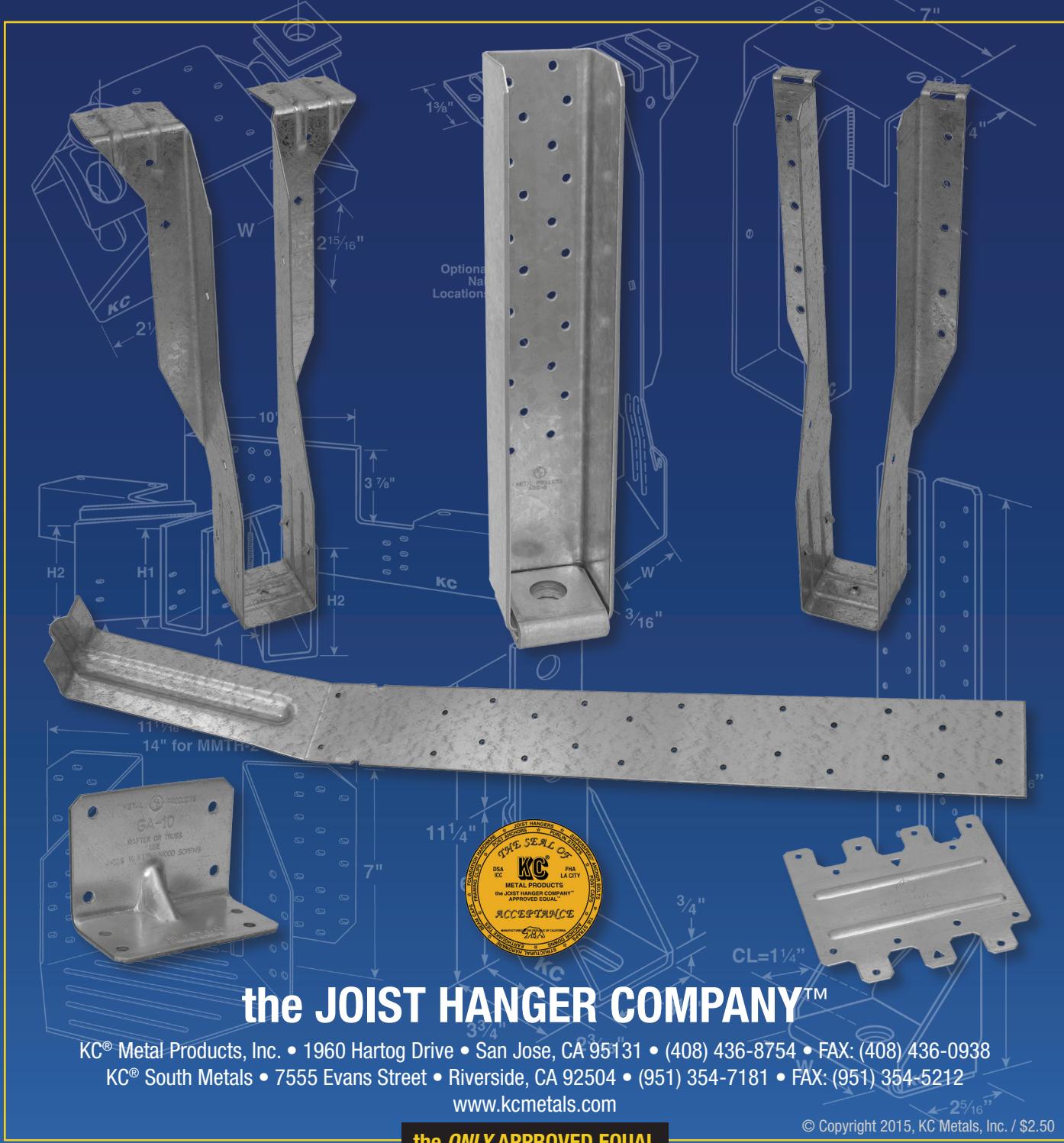


KC[®] METALS

SUPERSPEED[®] CONNECTORS

Connectors and Seismic Ties for Concrete, Steel Studs, Engineered Wood Products and Wood Construction



the JOIST HANGER COMPANY™

KC[®] Metal Products, Inc. • 1960 Hartog Drive • San Jose, CA 95131 • (408) 436-8754 • FAX: (408) 436-0938

KC[®] South Metals • 7555 Evans Street • Riverside, CA 92504 • (951) 354-7181 • FAX: (951) 354-5212

www.kcmetals.com

the **ONLY APPROVED EQUAL**

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For over thirty-nine years, **KC® Metal Products, Inc.** has remained the largest **family** owned manufacturer of builders structural hardware. Founded in San Jose, California in **1970**, the company owes its longevity in this **competitive** market to its allegiance to customers, constant pursuit of **new** and **better** manufacturing techniques, and dedication to producing the **best product** at the **best price**. With its headquarters in San Jose, **KC® Metal Products, Inc.**, along with its southern California branch, **KC® Metals South** in Riverside, can handle the **toughest jobs** no matter the **size or specifications**. By meeting your specific requirements and **tight deadlines** we will earn your **confidence** to supply your daily needs. The company's **competitive attitude** and devotion to its **product line** ensures that we will provide the **best product** and the **best alternative** to get the job **done right**, and at the **right cost** for you. We will strive to **serve you** in the best possible way. **KC® Metal Products, Inc.** and **KC® Metals South** look forward to continuing to supply you, our **valued customer**, with the **best structural connectors** the industry can provide.

NOTE: ALL REFERENCES IN THIS CATALOG TO "KC METALS" OR "KC" SHALL APPLY EQUALLY AND SHALL REFER TO **KC® METAL PRODUCTS, INC.** AND **TY-RITE TIMBER FASTENERS, INC.**, DOING BUSINESS AS **KC SOUTH METALS**.

EVALUATIONS

A wide range of code authorities evaluates **KC® Metals' SUPERSPEED®**

connectors, including:

ICC - International Code Council

Evaluation Service Report 2929 - Joist Hangers/Panelized Roof Hangers/Joist and Purlin Hangers/Heavy Structural Hardware/ Anchors and Straps/Post Anchors/Post Caps/Anchors and Clips/Angles/Tie Straps/ Foundation Hardware

Evaluation Service Report 2860 - Strap/Strapping

Evaluation Service Report 2930 - Wood I-Joist Hangers/Truss Hangers/Straps

Evaluation Service Report 5033 - KCAB **SUPERSPEED®** Anchor Bolts/Anchor Downs/Strap Anchors/Wall Anchors/Retrofit Connectors

Evaluation Service Report 5935 - Anchor Down Screw Type/Embossed Tie Straps/Roof Diaphragm Kip Straps

Other Code Acceptance:

City of Los Angeles No. RR24197 and 25209/Fabricators License No. 00986.

Meets the California Division of Architects (OSA), FHA and HUD Standards.

For easy identification of the company, all parts are stamped with **KC® Metal's** ICC Number, Part Number and/or Series Number/Label and Bar Code.

GAGE TABLE					
U.S. Standard Steel Gage Equivalents in Nominal Dimensions ¹					
GALVANIZED STEEL			GALVANIZED STEEL		
GAGE	IN DECIMALS ²	IN APPROXIMATE FRACTIONS	GAGE	IN DECIMALS ²	IN APPROXIMATE FRACTIONS
3	—	—	3	0.239" (6.0 mm)	1/4"
7	—	—	7	0.179" (4.5 mm)	5/16"
10	0.138" (3.5 mm)	1/8"	10	0.134" (3.4 mm)	1/8"
11	0.123 (3.1 mm)	1/8"	11	0.120" (3.0 mm)	1/8"
12	0.108" (2.7 mm)	5/32"	12	0.105" (2.6 mm)	5/32"
14	0.078" (2.0 mm)	5/32"	14	0.075" (1.9 mm)	1/16"
16	0.063" (1.6 mm)	1/16"	16	0.060" (1.5 mm)	1/16"
18	0.052" (1.3 mm)	1/16"	18	0.048" (1.2 mm)	1/16"
20	0.040" (1.0 mm)	5/32"	20	0.036" (0.9 mm)	5/32"
22	0.034" (0.8 mm)	5/32"	22	0.030" (0.7 mm)	5/32"

¹ The actual steel dimensions will vary from nominal dimensions according to industry tolerances

² mm = millimeters

ENGINEER'S AND ARCHITECTS GUIDE

GENERAL NOTES

1. **KC® Metal Products, Inc.** reserves the right to change specifications, design and models without notice or liability for such changes.
2. No authorization is made for product modification. If the product is not to the customers' requirements or specifications, the factory should be contacted in time to allow for correction or replacement.
3. Critical fabrication, welding and inspection techniques preclude acceptance of **SUPERSPEED®** connectors product change or adulteration by others without written permission from authorized factory personnel. This is necessary to guarantee the ultimate in quality and product performance. In the event of product design or fabrication disparity, contact **KC® Metal Products, Inc.** immediately. The factory is not liable for cost or performance of products modified by others.
4. For unusual supporting conditions or loading, excessive wood shrinkage hostile environment situations or abnormal erection requirements, please provide special product detailing and/or discuss with the factory.
5. Design loads given are based on the 2006 I-Codes (IBC) and the 2005 National Design Specifications (N.D.S.). Other code agencies and/or editions of the IBC may use different design loads.
6. Safe design loads in this catalog are based on the lower value of:
 - A. The ultimate tested load, divided by appropriate safety factor.
 - B. Load-producing 1/8" deflection.
 - C. Fastener values in accordance with the code.
7. Seat-bearing loads are based on the 2006 IBC. All of the design loads have been performed and documented by an independent testing laboratory in accordance with the ICC testing standards. Loads deflection and seating of joist in hanger is based upon installation using proper nails where required and first-class workmanship.
8. Unless otherwise noted, dimensions are in inches and design loads are in pounds. 8d, 10d, and 16d signify common nails. All reference to nominal lumber sizes relates to dressed or S4S dimensions.
9. Unless otherwise noted, allowable design loads are given are for use with Group II, specific gravity 0.50 for Douglas fir-Larch used under dry conditions. Design loads for other wood species must be adjusted according to the code.
10. Wood shear is not considered in the loads given; reduce allowable design loads when wood shear is limiting.
11. All catalog (code) design loads assume proper installation with the specified fasteners or nails. Install all fasteners before loading connection. Verify whether the support member dimensions can receive the specified nails.
12. For table and ICC uniformity, normal loads are basic design values with a 0% increase suitable for floor loading. Three-month snow duration loading for roofs is 1.15 times the normal load (a 15% increase). Maximum loads already include a 25% increase for seven-day construction and may be used for roofs in areas where there is no ground snow. Uplift loads have been increased by 33½% where applicable for wind and seismic stresses.
13. Where applicable, "maximum" uplift/tension load values listed indicate a 33½% increase. IBC has not recognized the 60% increases taken by some manufacturers. Please contact factory for these values.
14. **KC® Metal Products, Inc.** has revised calculated design loads based on the 2006 IBC Values. **In some cases, the evaluation reports may not reflect the increased values due to lag time in revision of the reports. Evaluation reports may be pending on some items.**
15. Pneumatic or power-actuated fasteners may deflect and injure the operator or others. Nail guns may be used to install connectors, provided the correct quantity and type of nails are properly installed in the nail holes. Guns with nail hole locating mechanisms should be used. Follow the manufacturer's instructions and use the appropriate safety equipment.
16. Unless otherwise noted, bending steel in the field may cause fractures at the bend line. Fractured steel will not carry load and must be replaced.
17. All references to bolts or machine bolts (MBs) are for structural quality through bolts equal to or better than American Society of Testing and Materials ASTM Standard A307 Grade A.

SPECIFICATION:

All items shall have an evaluation report where indicated and be equal in design, quality and specifications to those manufactured by **KC® Metals SUPERSPEED®** connectors, San Jose and Riverside, California.

EVALUATION INFORMATION

www.kcmetals.com

**ICC – International Code Council
of Building Officials**
5360 South Workman Mill Road
Whittier, California 90601
Phone: (562) 699-0543
Fax: (562) 695-4694
www.icc-es.org
Evaluation Service Report Nos. **2929, 2860,
2930, 5033, 2860**

DSA – Department of the State Architects
1300 "I" Street, Suite 800
Sacramento, California 95814
Phone: (916) 445-0783
Fax: (916) 327-3371
(916) 445-3521
www.dsa.dgs.ca.gov

LA City – City of Los Angeles
Department of Building and Safety
411 City Hall
Los Angeles, CA 90012
Phone: (213) 485-2376
Fax: (213) 847-0985
www.ladbs.org
Report Nos. **24197 and 25209**/Division 91
Fabricators License No. **00986**

The following conditions must be met to receive item evaluation/acceptance on wood hangers and framing devices.

- Tests conducted under the supervision of an ICC recognized independent testing laboratory having adequate experience and equipment to conduct such tests.
- Descriptive literature, detailed drawings, calculations and load test reports must be submitted. With this information, the connectors are designed with a safe, sound load in accordance with the Uniform Building Code.
- All welding is performed by welders certified to UBC standards and is quarterly inspected by an ICC recognized quality control agency.
- Quality control manual requiring each product to be individually inspected in all phases of manufacturing including first piece and in-process inspections conducted before and after painting.
- Material description, including material mill certifications (ASTM designation) available upon request. Only prime quality steel is used, and all steel is ordered based on strength, thickness, formability, weldability and finish.
- All connectors and anchors have barcode label and are stamped with the **KC® Metal Products, Inc.** logo and the model designation.
- Annual evaluation/acceptance payment fee and annual document re-examination required.

CORROSION RESISTANCE

KC® Metal Products, Inc. offers three coatings for products which require extra corrosion resistance. Deterioration will occur more quickly when hangers and straps are exposed to corrosive environments. Products are available in the standard galvanized material or painted with **KC® SUPERSPEED®** gray paint. If you

require additional protection, all parts are also available with **G-Max** (G185) triple zinc coating, hot dip galvanized coating or manufactured from stainless material. Fasteners used must also be considered when exposed to a corrosive environment. Please contact the factory for pricing and availability on these processes.

Hot Dip Galvanizing:

All products are available with a hot dip galvanized coating. This coating is applied after manufacture. The zinc content of the galvanization process is generally between 1.1 and 2.3 ounces per square foot of surface area. The actual thickness will vary with the material thickness of the part. This process provides the needed extra protection for adverse weather conditions.

Stainless Steel:

The best protection from adverse conditions is found in the use of stainless steel for manufacture. Type 316 stainless steel is used. It is recommended that stainless steel fasteners be used in conjunction with these specially manufactured hardware items.

G-MAX Triple Zinc Coating:

The standard coating requirement for ICC approved connectors is (G60) .60 oz of zinc per square foot of surface area. The standard coating requirement for **KC® Metal Products** connectors is (G90) .90 oz. of zinc per square foot of surface area. This is a 50% increase over ICC galvanized requirements.

G-Max (G185) or 3 times the ICC coating requirement. This triple zinc coating is available on many items in the **KCMP** product line.

FASTENING IDENTIFICATION

TRIANGLE



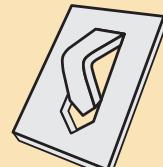
Triangle shaped holes are provided in some hangers for use to achieve the maximum load values. Both round and triangle holes must be filled in order to achieve these "max" values.

DIAMOND



Diamond shaped holes are provided in some hangers for temporarily holding the fasteners to the joist or header during the installation process. Also as optional nailing for increasing uplift.

SPEED PRONG



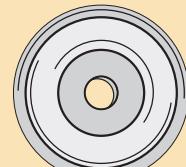
Speed prongs are found in many fasteners to provide faster and easier installation. These prongs act to hold the connector in place during the installation process.

SLOTTED



Slotted holes allow easier nailing when placement conditions are tight. In some cases, slotted holes can be placed in horizontally ("slant nailing") or vertically ("positive angle nailing"), depending on your requirements

EMBOSSED



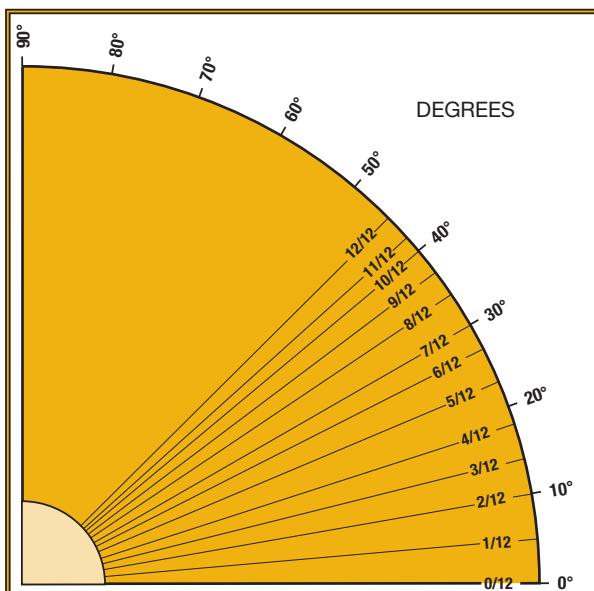
Embossed holes are used on certain straps enabling installation with a power activated gun, allowing faster and less expensive installation. Specify **"SS SUPERSPEED®** after the callout to indicate the embossed hole pattern.

PITCH CONVERSION

**Roof Slope
Conversion
Chart**

If Common Rafter Roof Pitch is ...		Then Hip/Valley Rafter Roof Pitch becomes ...	
Rise/Run	Slope	Rise/Run	Slope
1/12	5	1/17	3
2/12	10	2/17	7
3/12	14	3/17	10
4/12	18	4/17	13
5/12	23	5/17	16
6/12	27	6/17	19
7/12	30	7/17	22
8/12	34	8/17	25
9/12	37	9/17	28
10/12	40	10/17	30
11/12	42	11/17	33
12/12	45	12/17	35

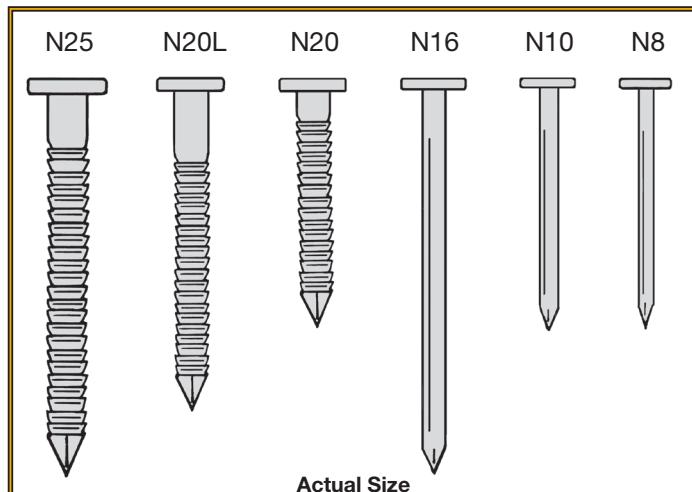
Use this conversion table only for hip/valley rafters that are skewed 45° right or left. All others will cause the slope to change from that listed above. Slope rounded to the nearest degree



NAIL CONVERSION / SIZES

Catalog Nail	Replacement Nail	Design Load Adjustment Factor
16d Common	10d x 1 1/2	0.64
16d Common	10d Common/12d Common	0.84
16d Common	16d Sinker	0.84
16d Common	16d x 2 1/2 (N16)	1.00
10d Common/12d Common	10d x 1 1/2	0.77
10d Common/12d Common	16d Sinker	1.00
8d Common	8d x 1 1/2	0.80
8d x 1 1/2	8d x 1 1/2	0.86
10d Hard	10d Common	0.64
10d Hard	10d x 1 1/2	0.52
16d Hard	10d Hand	0.84
16d Hard	16d Common	0.65
16d Hard	10d Common	0.54

KC® Metal Products, nails and structural fasteners have been developed as the optimum fasteners for connector products. Special lengths afford economy of purchase and installation, and depth compatibility with framing members. Nail specifications include head size, thickness, steel and shank design, and point configuration to ensure conformity to published values.



KC® STK NO.	REF NO.	DESCRIPTION	METRIC EQUIVALENT (mm)	FINISH	FASTENERS PER 50 LBS CARTON	DOUG FIR-LARCH/SO PINE DESIGN LOAD (LBS)		
						LIGHT GAGE		3 GAGE
						SHEAR (100)	GAGE	SHEAR (100)
N8	N8	(8d) 10 1/4 ga x 1 1/2" Smooth Shank	3.3 x 38.1	HDG	7600	86	14	105
N10	N10	(10d) 9 ga x 1 1/2" Smooth Shank	3.3 x 38.1	HDG	5900	92	14	112
N16	N16	(16d) 8 ga x 2 1/2" Smooth Shank	4.1 x 63.5	BRIGHT	3150	134	18	187
N20L	N20AN	(20d) 0.192 x 2 1/8" Annular Ring	4.9 x 54.0	BRIGHT	2750	145	14	174
N20	N20A	(20d) .192 x 1 3/4" Annular Ring	4.9 x 44.5	BRIGHT	3150	119	14	140
N25	N54A	.250 x 2 1/2" Annular Ring	6.4 x 63.5	BRIGHT	1350	167	14	188
10d Common	(10d) 0.148 x 3" Annular Ring	3.8 x 76.2	BRIGHT	3350	112	18	158	
16d Sinker	0.148 x 3 1/4" Smooth Shank	3.8 x 82.6	GV	3050	112	18	158	
12d Common	0.148 x 3 1/4" Smooth Shank	3.8 x 82.6	BRIGHT	3050	112	18	158	
16d Common	0.162 x 3 1/2" Smooth	4.1 x 88.9	BRIGHT	4400	134	14	187	
10d Hardened	0.148 x 2 1/2" Smooth	3.8 x 63.5	BRIGHT	NA	175	12	210	
16d Hardened	0.162 x 3 1/2" Smooth	4.1 x 63.5	BRIGHT	NA	207	12	245	

CATEGORY LISTING

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JOIST HANGERS	8 - 18	SKEWED OR SLOPED JOIST HANGERS	45	ANCHOR DOWNS	76 - 80		
E.....	Economy Hangers.....	8	S.....	Standard Hangers.....	45		
S, SR.....	Standard Hangers/Rough.....	8	H.....	Heavy Hangers.....	45		
SSL, SSR.....	Standard Skewed Left/Right Hangers (45°).....	8	HTF.....	Heavy Top Flange Hangers.....	45		
MSL, MSR.....	Medium Skewed Left/Right Hangers (45°).....	8	R, RA.....	Roof Hangers/Angled.....	45		
LS.....	Light Sloped Hangers.....	10	RH, RHG.....	Roof Heavy Hangers/Glulam.....	45		
LSS.....	Light Sloped/Skewed Hangers.....	10	RS.....	Roof Structure Hangers.....	45		
SSC.....	Sloped Seat Connectors.....	10	RSO.....	Roof Structure Oregon (Uplift) Hangers.....	45		
STP.....	Standard Truss Plated Hangers.....	12	RSH.....	Roof Structure Heavy Hangers.....	45		
HTP, HTPR.....	Heavy Truss Plated Hangers.....	12	RSG.....	Roof Structure Glulam Hangers.....	45		
HTPTF, HTPTFR.....	Heavy Truss Plated Top Flange Hangers.....	12	RSGH.....	Roof Structure Glulam Heavy Hangers.....	45		
HDTP.....	Heavy-Duty Truss Plated Hangers.....	12	STRUCTURAL HARDWARE SPECIALS	46			
HHDTP.....	Heavy Heavy-Duty Truss Plated Hangers.....	14	Ordering Information.....	46			
HHDTPQ.....	Heavy Heavy-Duty Truss Plated Hangers (Drive Screw).....	14	Hip Hardware.....	46			
H, HR.....	Heavy Hangers.....	16	Skewed, Offset or Sloped Hardware.....	46			
HTF, HTFR.....	Heavy Top Flange Hangers.....	18	Truss Hardware.....	46			
PANELIZED ROOF HANGERS	18 - 20	HANGER OPTIONS GENERAL NOTES	47	SHEAR WALLS	84		
PH, PHG.....	Panelized Hangers/Grip.....	18	HEAVY STRUCTURAL HARDWARE	48 - 52	SSWA.....	Anchor Bolt Shear Wall.....	84
FH.....	Formed Hangers.....	20	BH, BHS, LBH, MBH, BH.....	Beam Hangers.....	48		
JOIST AND PURLIN HANGERS	20 - 22	SH, SHT, HSHT.....	Saddle Hangers/Seismic Ties.....	48			
RS, RSO, RSH, RSG, RSGH.....	Roof Structure Hangers.....	20	HSH.....	Heavy Saddle Hangers.....	50		
R, RA, RH, RHG.....	Roof Hangers.....	22	HHC, HHC3.....	Heavy Hinge Connectors.....	50		
TR.....	Top Mount Hangers.....	22	HHCT, HHCM.....	Heavy Hinge Connector Tabs.....	50		
TRUSS HARDWARE	24 - 28	HCTS.....	Hinge Connector Tie straps.....	50			
LHJT.....	Light Hip/Jack Truss Hangers.....	24	CPT.....	Cross Purlin Ties.....	50		
LMTH.....	Light Multiple Truss Hangers.....	24	BS, BSH, BST.....	Beam Seats.....	52		
MHJT.....	Medium Hip/Jack Truss Hangers.....	24	ANCHORS AND STRAPS	52 - 54			
MMTH, MMTH-2.....	Multiple, Medium Truss Hangers.....	24	WA, WAH, WAI, WAL, WAM, WAW.....	Wall Anchors/Washers.....	52		
MTHTF2, MTHTF2-2.....	Multiple, Medium Truss Hangers Top Flange.....	26	ST, GST.....	Strap Ties/Glulam Strut Ties.....	52		
TGH2 (R/L).....	Truss Girder Hangers Skewed Left/Right (45°).....	26	DST.....	Drag Strut Ties.....	54		
TGH, TGHH, TGHW.....	Truss Girder Hangers.....	26	KB.....	Knee Braces.....	54		
ATH.....	Adjustable Truss Hangers.....	28	POST CAPS	54 - 58			
AHSL, ATHSR.....	Adjustable Truss Hangers Skewed Left/Right (45°).....	28	PC.....	Post Caps.....	54		
ATHI.....	Adjustable Truss Hangers I-Joist.....	28	PB, EPB, LEPB4.....	Post Beam Caps.....	54		
ATHISL, ATHISR.....	Adjustable Truss Hangers I-Joist Skewed Left/Right (45°).....	28	PTC.....	Post Tie Caps.....	54		
WOOD I-JOIST CONNECTORS	30 - 43	MC, HH.....	Mullion Clips/Header Hangers.....	56			
Ordering Information.....	30	TCB.....	Truss Clip Bases.....	56			
Designer and Installer Instructions.....	30	TSC.....	Truss Scissors Connectors.....	56			
Common Installation Errors with Use of a Nailer.....	30	SPT, SPTR, SPTS, SPTD ..	Stud Plate Ties.....	56			
Installation Errors for Top Mount Hangers.....	31	BCQ, EBCQ, BC, EBC, BCO, BCOB, BCC, BCT, EBCL ..	Beam Caps.....	58			
Engineered Wood Product Sizes.....	31	SC, ESC.....	Splice Caps.....	58			
KC® SUPERSPEED® Drive Screws.....	31	POST ANCHORS	60 - 62				
Face Mount Hangers.....	32	HA, HAS, HAQ, HASQ.....	Heavy Anchors/Stand-Off.....	60			
Top Mount Hangers.....	32	PA, PAS.....	Post Anchors/Stand-Off.....	60			
Top Mount Hangers (Shear Walls).....	33	PAM, PAMR.....	Post Anchors/Medium Heavy.....	62			
TR.....	Top Mount Hangers (Light).....	36	EA.....	Elevated Anchors.....	62		
TRS.....	Grip Lock™ to Joist.....	34	AA, AAEI.....	Adjustable Anchors/Economy Long.....	62		
MTR.....	Top Mount Hangers (Medium).....	37	DA, DAS.....	Deck Anchors/Stand-Off.....	62		
HTR.....	Top Mount Hangers (Heavy).....	37	ANCHORS AND CLIPS (WOOD-TO-WOOD)	64 - 66			
RSL, RS/RSI, RSO/RSOI.....	Top Mount Hangers.....	38	FA3, FA6, FAL, FALW.....	Framing Anchors.....	64		
R/RI, R/RAI, RAU, RH/RHI, RHU, RM/RMI, RMU.....	Roof Hangers Welded Type (Masonry Uplift).....	40	CA, CAS.....	Clip Anchors/Skewed.....	64		
SI, MUI.....	U-Type (Universal) Joist Hangers.....	42	HT.....	Hurricane Ties.....	66		
ISU.....	Top Mount to Header (Self-Jigging to Header).....	34	TC, TCL, TCD, TCH.....	Truss Clips.....	66		
TRS.....	Top Mount to Header (Grip Lock™ to Joist).....	34	ANGLES AND BRACES	68			
BHV, BHSV.....	Heavy-Duty Hangers (Double/Triple Type).....	43	LL, ML.....	Light Angles/Medium Angles.....	68		
BHQ.....	Heavy Beam Hanger (Screw Type).....	43	ZH.....	"Z" Hangers (Clips).....	68		
STEEL STUD HARDWARE	44	T, TH, L, LH.....	Braces.....	68			
SDS.....	Screws.....	44	ANGLES AND ANCHORS	70 - 74			
ST/CA, ST/CAS.....	Clip Anchors/Skewed.....	44	HL, HLG.....	Heavy Angles/Gussets.....	70		
ST/WA, ST/WAH 14.....	Wall Anchors.....	44	GA.....	Gusset.....	70		
ST/AD.....	Anchor Downs.....	44	GTH, GTL, GTM.....	Girder Ties.....	70		
ST/R, ST/RS.....	Roof Hangers.....	44	STA.....	Stair Tread Angles.....	70		

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METALS PRODUCTS, INC.
SUPERSPEED® CONNECTORS

Testing

104 - 105

ALPHABETICAL LISTING – KC® METAL PRODUCTS, INC.

KC® Metals	Description	Ref No	Page	KC® Metals	Description	Ref No	Page	KC® Metals	Description	Ref No	Page	
3MTS SS	SUPERSPEED® Embossed Tie Straps.	—	86	HSA	Heavy Strap Anchor	HPA/HPAHD	72, 74	RFS	Retrofit Foundation Strap	FJA / FSA	.96	
3X CNS	SUPERSPEED® Embossed Diaphragm Straps.	—	88	HSH	Heavy Saddle Hanger	HGLS...	50	RH	Roof Hanger	HW	.22, 40, 45	
3XCNS KIP	SUPERSPEED® Embossed Diaphragm Straps.	—	88	HSHT	Heavy Saddle Hanger/Seismic Tie	HGLST...	48	RHG	Roof Hanger Glulam	HW	.22, 45	
3XTS SS	SUPERSPEED® Embossed Tie Straps.	—	86	HT	Hurricane Tie	H / HCP	66	RHI	Roof Hanger I-Joist	HWI	.40	
AA	Adjustable Anchor	AB	62	HTF	Heavy Top Flange Hanger	HUTF...	18, 45	RHU	Uplift Roof Hanger	HWU	.40	
AAEL	Adjustable Anchor Long	ABU	62	HTFR	Heavy Top Flange Hanger (Reverse)	HUCTF...	18	RI	Roof Hanger I-Joist	WI	.40	
ABC	Anchor Bolt Chair	—	82	HTP	Heavy Truss Plated Hanger	HUS...	12	RM	Masonry Hanger	WM	.40, 100	
AD	Anchor Down	HD	76	HTPR	Heavy Truss Plated Hanger (Reverse)	HUSC...	12	RMI	Masonry Hanger I-Joist	WMI	.40	
ADA	Anchor Down	HDA	76	HTPTF	Heavy Truss Plated Top Flange Hanger	HUSTF...	12	RMU	Masonry Hanger (Uplift)	WMU	.40	
ADAG	Anchor Down	HDA	76	HTPTFR	Heavy Truss Plated Top Flange Hanger (Reverse)	HUSCTF...	12	RPA	Retrofit Post Anchor	CBA66	.96	
ADB6	Anchor Down	HDA	76	HTR	Heavy Top Mount Hanger	HIT...	37	RPS	Tie Strap	RPS	.102	
ADC	Anchor Down Concentric	HDC	78	HTS	Heavy Tie Strap	HST...	90	RR	Rafter Ridge Connectors	RR	.102	
ADG	Anchor Down Quick	HDU/HDO/HDD 078		HTW	Heavy Twist Strap	HTS...	90	RS	Roof Structure Hanger	B / LB	.20, 38, 45	
ADST	Anchor Down Quick	HDU/PHD-SDS...78		HTWC	Heavy Twist Strap Centered	HTSC...	90	RSG	Roof Structure Hanger	GB	.20,45	
ATH	Adjustable Truss Hanger	THA	28	ISU	Hanger I-Joist	IUS...	34	RSGH	Roof Structure Hanger	HGB	.20, 45	
ATHI	Adjustable Truss Hanger I-Joist	THAI	28	KB	Knee Brace	VB...	54	RSH	Roof Structure Hanger	HHB	.20, 45	
ATHR	Adjustable Truss Hanger	THAC	28	KCAB	KC® Anchor Bolt	SSTB...	82	RSI	Roof Structure Hanger I-Joist	BI	.38	
ATHSR/L	Adjustable Truss Hanger Skewed	THASR/L	28	L	"L" Brace	L...	68	RSL	Roof Structure Hanger Light I-Joist	LBV	.38	
BC	Beam Cap	CC	58	LBH	Light Glulam Beam Hanger	LEG...	46, 48	RSO	Roof Structure Hanger	HB	.20, 38, 45	
BCC	Beam Cap Centered	CCC	58	LBW	Light Bearing Washer	LBP...	81	RSOI	Roof Structure Hanger I-Joist	HBI	.38	
BCO	Beam Cap No Legs	CCO	58	LBWS	Light Bearing Washer Slotted	Lbps...	81	RSV	Joist and Purlin Hanger	LBV	.38	
BCOB	Beam Cap On Back	CCOB	58	LEPB4	Post Beam Cap	LCE4...	54	S	Standard Hanger	U	.8, 45	
BCOQ	Beam Cap No Legs Quick	CCOQ	58	LH	"L" Brace Heavy	HL...	68	SA	Strap Anchor	PA/PAHD	.72, 74	
BCOT	Beam Cap No Legs "T"	CCOT	58	LHJTR/L	Light Hip/Jack Truss Hanger Skewed	LTHJR/L...	24	SAI	Strap Anchor I-Joist	PAI	.72	
BCQ	Beam Cap Quick	CCQ	58	LMA	Light Angle	A...	68	SAMT	Strap Anchor Twist Masonry	PATM	.72	
BCT	Beam Cap "T"	CC	58	LMAT	Light Mudsill Anchor	LMA...	94	SB	Stud Brace	SS	.102	
BH	Glulam Beam Hanger	GLT	46, 48	LMTH	Light Multiple Truss Hanger	LTHMA...	24	SBB	Shelf Bracket Big	SBV	.101	
BHS	Glulam Beam Hanger	HGLT	48	LS	Light Sloped/Hanger	LSU...	10	SBS (CFA)	Shelf Bracket Small	CF-R	.101	
BHSV	Heavy Duty Hanger	HGLTV	43	LSS	Light Sloped/Skewed Hanger	LSSU...	10	SC	Splice Cap	PC	.58	
BHV	Heavy Duty Hanger	GLTV	43	LSSAD	SUPERSPEED® Strap Anchor	Down Embedded	LSTHD...	74	SDS	SUPERSPEED® Drive Screw	SDS	.80
BS	Beam Seat	GLB	52	LSSADRJ	SUPERSPEED® Strap Anchor Down Rim Joist	LSTHDRJ...	74	SFC	Speed Form Clip	—	.94	
BSH	Beam Seat Heavy	HGLB	52	LTSA	Light Tie Strap	LSTA...	90	SH	Saddle Hanger	GLS	.48	
BST	Beam Seat "T"	GLBT	52	LTSI	Light Tie Strap I-Joist	LSTI...	90	SHT	Saddle Hanger/Seismic Tie	GLST	.48	
BW/BWS	Bearing Washer (Slotted)	BP/BPS	80	MA	Mudsill Anchor	MA / MAB...	94	SI	Standard Hanger I-Joist	IUT	.42	
BW-KIT	Bearing Washer	BP-KIT	80	MAS	Mudsill Anchor Single-Side	MAS...	94	SP	Safety Plate	NS	.101	
CA	Clip Anchor	L	64	MBH	Medium Beam Hanger	MEG...	48	SPT	Stud Plate Tie	SSP	.56	
CAD	California Anchor Down System	ATS	106	MBHGR/L	Masonry Beam Hanger	MBHA...	100	SPTD	Stud Plate Tie Double	DSP	.56	
CAS	Clip Anchor Skewable	LS	64	MBHGR/L	Masonry Beam Hanger	MBHAR/L...	100	SPTH	Stud Plate Tie Heavy	SPH	.56	
CNS	SUPERSPEED® Embossed Diaphragm Straps.	—	88	MC	Skewed Right/Left (45°)	MBHAR/L...	100	SPTR	Stud Plate Tie (Reverse)	RSP	.56	
CNS KIP	SUPERSPEED® Embossed Diaphragm Straps.	—	88	MULLION	Mullion Clip	FC...	56	SPTS	Stud Plate Tie Single	SSP	.56	
CPT	SUPERSPEED® Embossed Diaphragm Straps.	—	88	MHJT	Medium Hip/Jack Truss Hanger	THJA...	24	SSAD	SUPERSPEED® Strap Anchor Down	STHD	.74	
CSAI	Strap Anchor I-Joist	CPAI	72	ML	Medium Angle	A...	68	SSADRJ	SUPERSPEED® Strap Anchor	STHD...	.74	
DA	Deck Anchor	BCO	62	MMTH	Medium Multiple Truss Hanger	MTHM...	24	SSW	SUPERSPEED® Shear Wall	SSW	.84	
DAS	Deck Anchor Stand Off	APS	62	MSAI	Masonry Strap Anchor I-Joist	MPAI...	72	ST	Strap Tie	SA	.52	
DSTL/R-SDS	Drag Strut Tie	DSCLR-SDS	.54	MSC	Multiple Seat Connector	MSC...	—	ST/AD	Steel Stud Hardware	S/HD	.44	
E	Economy Joist Hanger	LU	8	MSP	Mudsill Plate Washer	—	80	ST/CA	Steel Stud Hardware	S/L	.44	
EA	Elevated Anchor	EPB	62	MSR/L	Medium Skewed Right/Left Hanger (45°)	HSUR/L...	8	ST/CAS	Steel Stud Hardware	S/LS	.44	
EA-12	Elevated Anchor 12 Inch	EPB-12	62	MSR/LC	Medium Skewed Right/Left Hanger	(45°) (Reverse)	HSUR/LC...	8	ST/R	Steel Stud Hardware	S/W	.44
EBC	End Beam Cap	ECC	58	MTHFT	Multiple Truss Hanger Top Flange	MSCPT...	26	ST/RS	Steel Stud Hardware	S/B	.44	
EBCL	End Beam Cap "L" Type	ECCL	58	MTHFTN	Multiple Truss Hanger Top Flange	MSCPTN...	27	ST/WA	Steel Stud Hardware	S/LT20	.44	
EBCO	End Beam Cap No Legs	ECCO	58	MTR	Medium Top Mount Hanger	MIT...	37	ST/WAH14	Steel Stud Hardware	S/HTT14	.44	
EBCOQ	End Beam Cap No Legs Quick	ECCOQ	58	MTS	Medium Tie Strap	MST...	86, 90	STA	Standoff Tread Angle	TA	.70	
EBCQ	End Beam Cap Quick	ECCQ	58	MTS SS	SUPERSPEED® Embossed Tie Straps	—	86	STP	Standard Truss Hanger	LUS	.12	
EPB	End Post Beam Cap	ACE	54	MTSC	Tie Strap Countersunk	MSTC...	86, 90	T	"T" Brace	T	.68	
ESC	End Splice Cap	EPC	58	MTSC SS	SUPERSPEED® Embossed Tie Straps	—	86	TC	Roof Truss Clip	STC	.66	
ETAH	Embedded Truss Anchor Heavy	HETA	72	MTSI	Medium Tie Strap I-Joist	MSTI...	86, 90	TCB	Truss Clip Base	TBE	.56	
ETAH	Embedded Truss Anchor Heavy Heavy	HHETA	72	MTSI SS	SUPERSPEED® Embossed Tie Straps	—	86	TCD	Roof Truss Clip Double	DTC	.66	
ETAM	Embedded Truss Anchor Medium	META	72	MTW	Medium Twist Strap	MTS...	90	TCH	Roof Truss Clip Heavy	HTC	.66	
FA	Framing Anchor	A	64	MTWC	Medium Twist Strap Centered	MTSC...	90	TCL	Roof Truss Clip Long	STCT	.66	
FAL/FALW	Framing Anchor/Lateral Wall	LTP/RBC	64	MUI	Medium Hanger I-Joist	MIU...	42	TGH	Truss Girder Hanger	THGB	.26	
FB	Fence Bracket	FB	101	MUL	Nails	N...	4	TGHH	Truss Girder Hanger Heavy	THGBH	.26	
FH	Formed Hanger	FN	20	NP	Nail Plate	TP...	102	TGR/L	Truss Girder Hanger Skewed Right/Left (45°)	THGHL/R...	.26	
FHA	Tie Strap	FHA	90	NPA	Nail Plate	TPA...	102	TGHW	Truss Girder Hanger Wrap Around	THGHW...	.26	
FJ	Floor Jack	J/JP	96	OA	Ornamental Angle	OHA...	98	TH	"T" Brace Heavy	HT	.68	
FST	Floor Strap Tie	FTA	80	OCB	Ornamental Beam Cap	OCC...	98	TR	Top Mount Hanger	JB / ITT	.22, 36	
FSTL	Floor Strap Tie Light	LFTA	80	OEBC	Ornamental End Beam Cap	OECC...	98	TRN	Post Frame Hanger	PF	.22	
GA	Gusset Angle	HGA	70	OH	Ornamental Hanger	OHU...	98	TS	Tie Strap	ST	.90	
GH	Girder Hanger	GH	94	OHA	Ornamental Heavy Anchor	OCB...	98	TRS	Hanger I-Joist	ITS	.34	
GST	Glulam Strut Tie	HSA	52	OHS	Ornamental Heavy Strap Tie	OHS...	98	TS SS	SUPERSPEED® Embossed Tie Straps	—	.86	
GTH	Girder Tiedown Heavy	HGT	70	OL	Ornamental "L" Brace	OL...	98	TSA	Tie Strap	MSTA	.90	
GTL	Girder Tiedown Light	LGT	70	OLH	Ornamental "L" Brace Heavy	OHL...	98	TSC	Truss Scissor Clip	TC	.56	
GTM	Girder Tiedown Medium	MGT	70	OS	Ornamental Strap Tie	OS...	98	TW	Twist Strap	TS	.90	
H	Heavy Hanger	HU	16, 45	OT	Ornamental "T" Brace	OT...	98	W1	Wedge	W1	.94	
HA	Heavy Anchor	CB	60	OTH	Ornamental "T" Brace Heavy	OHT...	98	WA	Wall Anchor	LTT	.52	
HAQ	Heavy Anchor Quick	CBO	60	PA	Post Anchor	PB...	60	WAH	Wall Anchor Heavy	HTT	.52	
HAS	Heavy Anchor Stand Off	CBS	60	PAM	Post Anchor Medium	LCB...	62	WAI	Wall Anchor I-Joist	LTT/LTI	.52	
HASQ	Heavy Anchor Stand Off Quick	CBSQ	60	PAS	Post Anchor Standoff	PBS...	60	WAL	Wall Anchor Light	LTT-B	.52	
HBH	Heavy Beam Hanger	EG	48	PB	Post Beam Cap	AC...	54	WAM	Wall Anchor Medium	MTT-B	.52	
HBHQ	Heavy Beam Hanger Screw Type	EGQ	43	PC	Post Cap	BC/BCS...	54	WAW	Wall Anchor Washer	RP6	.52	
HCTS	Hinge Connector Tie Strap	HCST	51	PCS	Steel Plywood Clip	PSCL...	101	WB	Wall Bracing Flat	WB	.92	
HDTP	Heavy Duty Truss Plated Hanger	HHUS	12	PH	Panel Hanger	F...	18	WBA	Wall Bracing Angle	CWB	.92	
HH	Header Hanger	HH	56	PHG	Panel Hanger Grip Type	F_N...	18	WFT	Wedge Form Tie	WT	.94	
HHC	Heavy Hinge Connector	HCA	50	PHGLTF	Panel Hanger Long Top Flange	HFN...	18	XB	Tension Bridging	TB	.92	
HHC2M	Heavy Hinge Connector	HC2CTA	50	PTC	Post Tie Cap	LPC...	54	ZH	"Z" Hangers (Clip)	Z	.68	
HHC3	Heavy Hinge Connector	HC3A	50	R	Roof Hanger	W...	22, 40, 45					
HHC3/4M	Heavy Hinge Connector	HC4C3TA	50	RA	Roof Hanger	WNP/WP	22, 40, 45					
HHC3M	Heavy Hinge Connector	HCC3TA	50	RAI	Roof Hanger I-Joist	WNPI...	40					
HHC4M	Heavy Hinge Connector	HC4CTA	50	RAU	Uplift Roof Hanger	WPU...	40					
HCM	Heavy Hinge Connector	HCCTA	50	RCS	Retrofit Coil Strap	CS/CMST...	92					
HDHTP	Heavy Heavy Duty Truss Plated Hanger	HGUS	14	RCS-R	Retrofit Coil Strap Retail	CS-R...	92					
HDHTPQ	Heavy Heavy Duty Truss Plated Hanger Quick	HGUSQ	14	RCSC	Retrofit Coil Strap Counter Sink	CMSTC...	92					
HL	Heavy Angle	HL	70	RFA	Retrofit Foundation Angle	FA / HFA	96					
HPS	Heavy Piling Strap	PS	90	RFP	Retrofit Foundation Plate	FAP...	96					
HR	Heavy Hanger (Reverse)	HUC	16									
HRO	Heavy Hanger Quick(Reverse)	HUCQ	14									

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Ref No	KC® Stock No	Description	Page	Ref No	KC® Stock No	Description	Page	Ref No	KC® Stock No	Description	Page																																																																																																								
A	LL, ML	Angle	68	HGUS	HHDP <small>T</small>	Hanger	14	Ornamentals	Ornamentals	Ornamental	98																																																																																																								
A34/A35	FA3/FA6	Anchor	64	HH	HH	Hanger	56	PA.....	SA	Holdown.....	72, 74																																																																																																								
AB	AA	Post Base	62	HHB	RSH	Hanger	20, 45	PA/PATM.....	SA/SAMT.....	Purlin Anchor	72																																																																																																								
ABU	AAEL	Post Base	62	HHETA	ETAH <small>H</small>	Truss Anchor	72	PAHD	SA	Holdown.....	72, 74																																																																																																								
AC	PB	Post Cap	54	HHDQ	ADG	Heavy Holdown	78	PAI	SAI	Purlin Anchor (I-Joist)	72																																																																																																								
APS	DAS	Base	62	HHUS	HDTP	Hanger	12	PAT	SAT	Purlin Anchor Twist	72																																																																																																								
ATS.....	CADS	Tie-Down System	106	HIT	HTR	Hanger	37	PB	PA	Post Base	60																																																																																																								
B	RS	Hanger	38	HL	HL	Angle	70	PBS	PAS	Post Base	60																																																																																																								
BC/BCS	PC	Cap/Base	54	HPA	HAS	Holdown	72, 74	PC	SC	Post Cap	58																																																																																																								
BCO	DA	Base	62	HPAHD	HSA	Holdown	72, 74	PCT	CPT	Purlin Cross Tie	50																																																																																																								
BI	RSI	Hanger	58	HSA	GST	Strap	52	PF	TRN	Hanger	22																																																																																																								
BP/BPS	BW/BWS	Bearing Plate (Slotted)	80	HST	HTS	Strap	90	PHD	ADST	Holdown	78																																																																																																								
CB	HA	Column Base	60	HSUR/HSL	MSR/MSL	Hanger	8	PS	HPS	Strap	90																																																																																																								
CBQ	HAQ	Column Base	60	HTC	TCH	Heavy Truss Clip	66	PSCL	PCS	Sheathing Clip	101																																																																																																								
CBS	HAS	Column Base	60	HTS	HTW	Twist Strap	90	RBC	FALW	Anchor	64																																																																																																								
CBSQ	HASQ	Column Base	60	HTSC	HTWC	Twist Strap (Center)	90	RP	WAW	Washer	52																																																																																																								
CC	BC	Column Cap	58	HTT	WAH	Tension Tie	52	RPS	RPS	Strap Tie	102																																																																																																								
CCQ	BCQ	Column Cap	58	HU	H	Hanger	16, 45	RR	RR	Connector	102																																																																																																								
CF-R	CFA8	Form Angle/Shelf Bracket	101	HUS	HTP	Hanger	12	RSP	SPTR	Stud Plate Tie	56																																																																																																								
CMST	RCS	Strap	92	HUSC	HTPR	Hanger	12	SA	ST	Strap	52																																																																																																								
CMSTC	RCSC	Coiled Strap	92	HUSTF	HTPTF	Hanger	12	SBV	SBB	Shelf Bracket	101																																																																																																								
CPAI	CSAI	Purlin Anchor	72	HUTF	HTF	Hanger	18, 45	SDS	SDS	Screw	80																																																																																																								
CS	RCS	Strap	92	HW	RH/RHG	Hanger	22, 40, 45	SP	SPT	Stud Plate Tie	56																																																																																																								
CWB	WBA	Wall Bracing	92	HWU	RHU/RHGU	Hanger	40	SPH	SPTH	Stud Plate Tie	56																																																																																																								
DSC	DST	Drag Strut Connector	54	ITS	TRS	Hanger (I-Joist)	34	SS	SB	Stud Shoe	102																																																																																																								
DSP	SPTD	Stud Plate Tie (Double)	56	ITT	TR	Hanger (I-Joist)	22, 36	SSP	SPTS	Stud Plate Tie Single	56																																																																																																								
DTC	TCD	Roof Truss Clip	66	IUT	ISU	Hanger (I-Joist)	34	SSW	SSW	Shear Wall	84																																																																																																								
ECC	EBC	Column Cap	58	IUS	ISU	Hanger (I-Joist)	34	ST	TS	Strap Tie	90																																																																																																								
ECCQ	EBCQ	Column Cap	58	JB	TR	Hanger	22, 36	STC	TC	Roof Truss Clip	66																																																																																																								
ECCU	EBCU	Column Cap	58	L ANGLE	CA	Angle	64	STCT	TCL	Roof Truss Clip	66																																																																																																								
EG	HBH	Hanger	48	L STRAP TIE	L	Strap Tie	68	STHD	SSAD	Holdown	74																																																																																																								
EGP	HBHP	Hanger	48	LB	RS	Hanger	20, 38, 45	SUR/SUL	SSR/SSL	Hanger	8																																																																																																								
EPB	EA	Post Base	62	LBP/LPBS	LBW/LBWS	Light Bearing Plate (Slotted)	81	T	T	Strap Tie	68																																																																																																								
EPC	ESC	Post Cap	58	LBV	RSL	Hangers	38	TA	STA	Staircase Angle	70																																																																																																								
F	PH	Hanger	18	LCB	PAM	Column Base	62	TB	XB	Tension Bridging	92																																																																																																								
FA	RFA	Foundation Anchor	96	LCE4	LEPB4	Post Cap	54	TBE	TCB	Truss Enhancer	56																																																																																																								
FAP	RFP	Foundation Plate	96	LEG	LBH	Hanger	46, 48	TC	TSC	Truss Connector	56																																																																																																								
FB	FB	Fence Bracket	101	LFTA	FSTL	Floor Tie Anchor	80	THA	ATH	Hanger	28																																																																																																								
FC	MC	Framing Clip	56	LGT	GTL	Girder TieDown	70	THAC	ATHR	Hanger	28																																																																																																								
FHA	FHA	Strap Tie	90	LMA	LMA	Mudsill Anchor	94	THAI	ATHI	Hanger (I-Joist)	28																																																																																																								
FJA	RFS	Anchor	96	LPC	PTC	Post Cap	54	THASR/L	ATHSR/L	Truss Hanger	28																																																																																																								
FN	PHG	Hanger	18	LS	CAS	Angle	64	THGAR/L	TGHR/L	Hanger	26																																																																																																								
FSA	RFS	Anchor	96	LSSU	LSS	Hanger	10	THGB	TGH	Hanger	26																																																																																																								
FTA	FST	Floor Tie Anchor	80	LSTA	LTSA	Strap Tie	90	THGBH	TGHH	Hanger	26																																																																																																								
GB	RSG	Hanger	20, 45	LSTHD	LSSAD	Holdown	74	THGW	TGHW	Hanger	26																																																																																																								
GH	GH	Hanger	94	LSTI	LTSI	Strap Tie	90	THJ	MHJT	Hanger	24																																																																																																								
GLB	BS	Beam Seat	52	LSU	LS	Hanger	10	TP/TPA	NP/NPA	Tie Plate	102																																																																																																								
GLBT	BST	Beam Seat	52	LTHJ	LHJT	Hanger	24	TS	TW	Twist Strap	90																																																																																																								
GLS	SH	Hanger	48	LTHMA	LMTH	Hanger	24	U	S	Hanger	8, 45																																																																																																								
GLT	BH	Hanger	46, 48	LTP	FAL	Framing Anchor	64	VB	KB	Knee Brace	54																																																																																																								
GLTV	BHV	Hanger	43	LTT/LTTI	WA/WAI	Tension Tie	52	VPA	SSC	Connector	10																																																																																																								
H	HT	Hurricane Ties	66	LU	E	Hanger	8	W	R	Hanger	22, 40, 45																																																																																																								
HANGER.....	Options	Options	47	LUS	STP	Hanger	12	WB	WB	Wall Bracing	92																																																																																																								
HB	RSO	Hanger	20, 38, 45	MA	MA	Mudsill Anchor	94	WM	RM	Hanger	40, 100																																																																																																								
HBI	RSOI	Hanger	38	MAS	MAS	Mudsill Anchor	94	WMU	RMU	Hanger	40																																																																																																								
HCA	HHC	Hinge Connector	50	MBHA	MBHG	Masonry Hanger	100	WNP	RA	Hanger	22, 40, 45																																																																																																								
HCP	HT	Hip Corner Plate	66	MEG	MBH	Hanger	48	WP	RAI	Hanger	40																																																																																																								
HCSTR	HCTS	Strap	51	META	ETAM	Truss Anchor	72	WPU	RAU	Hanger	40																																																																																																								
HD/HDA	AD/ADA	Holdown	76	MGT	GTM	Girder Tiedown	70	WT	WFT	Wedge Form Tie	94																																																																																																								
HDU	ADSTG/ADG	Holdown	78	MIT	MTR	Hanger	37	HDC	ADC	Concentric Holdown	78	MIU	MUI	Hanger	42	Z	ZH	Clip	68	HDQ	ADG	Holdown	78	MPAI	MSAI	Purlin Anchor (I-Joist)	72	HETA	ETAH	Truss Anchor	72	MSCPT	MTHTF	Hanger	26	HFA	RFA	Hanger	96	MST	MTS	Strap Tie	86, 90	HFN	PHG_LTF	Hanger	18	MSTA	TSA	Strap Tie	90	HGA	GA	Gusset Angle	70	MSTC	MTSC	Strap Tie	86, 90	HGB	RSGH	Hanger	20, 45	MTSI	MTSI	Strap Tie (I-Joist)	86, 90	HGLB	BSH	Beam Seat	52	MTHM/MTHM-2 MMTM/MMT-2	Hanger	24	HGLS	HSH	Hanger	50	MTS	MTW	Twist Strap	90	HGLT	BHS	Hanger	48	MTSC	MTWC	Twist Strap (Center)	90	HGLTV	BHSV	Hanger	43	MTT	WAM	Tension Tie	52	HGT	GTH	Girder Tiedown	70	NAILS	NAILS	Nails	4	HGUQ	HHDTQ	Girder Truss Hanger	14	NS/NSP	SP	Nail Stopper	101
HDC	ADC	Concentric Holdown	78	MIU	MUI	Hanger	42	Z	ZH	Clip	68																																																																																																								
HDQ	ADG	Holdown	78	MPAI	MSAI	Purlin Anchor (I-Joist)	72																																																																																																												
HETA	ETAH	Truss Anchor	72	MSCPT	MTHTF	Hanger	26																																																																																																												
HFA	RFA	Hanger	96	MST	MTS	Strap Tie	86, 90																																																																																																												
HFN	PHG_LTF	Hanger	18	MSTA	TSA	Strap Tie	90																																																																																																												
HGA	GA	Gusset Angle	70	MSTC	MTSC	Strap Tie	86, 90																																																																																																												
HGB	RSGH	Hanger	20, 45	MTSI	MTSI	Strap Tie (I-Joist)	86, 90																																																																																																												
HGLB	BSH	Beam Seat	52	MTHM/MTHM-2 MMTM/MMT-2	Hanger	24																																																																																																												
HGLS	HSH	Hanger	50	MTS	MTW	Twist Strap	90																																																																																																												
HGLT	BHS	Hanger	48	MTSC	MTWC	Twist Strap (Center)	90																																																																																																												
HGLTV	BHSV	Hanger	43	MTT	WAM	Tension Tie	52																																																																																																												
HGT	GTH	Girder Tiedown	70	NAILS	NAILS	Nails	4																																																																																																												
HGUQ	HHDTQ	Girder Truss Hanger	14	NS/NSP	SP	Nail Stopper	101																																																																																																												



JOIST HANGERS

E

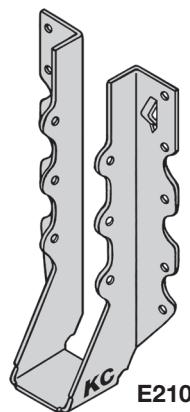
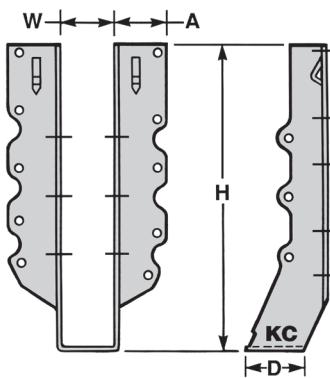
ECONOMY JOIST HANGERS

Design Features . . combine greater strength with maximum economy. **KC® SUPERSPEED®** prongs secure **E** hangers to header for fast, easy nailing.

- **Joist sizes** . . 2 x 4 to 2 x 14.

Material . . 18 ga. galvanized steel.

Special . . economical price and ease-of-use make these an ideal hanger for the do-it-yourself market.



E210

S

STANDARD JOIST HANGERS (ROUGH)

Design Features . . provide proper balance between load-carrying capacity of hanger and the joist it supports. Hanger configuration changes for heavy-duty **S66** and **S610**.

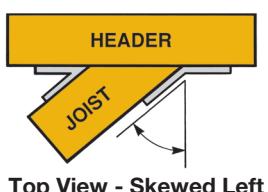
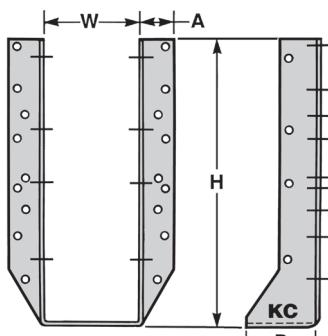
- **Joist sizes** . . 2xs, 3xs, 4xs, 6xs, double 2xs and triple 2xs . . also available on special order for rough beam sizes.

• To order rough sizes, add **R** to stock no. (Example: **SR26**)

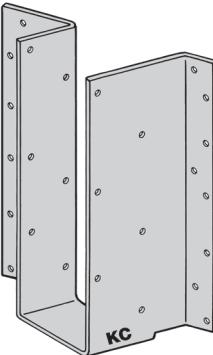
Material . . 16 ga. galvanized steel. Meets specifications for schools and public buildings.

Loads . . can be increased with the use of 16d nails in header for **S24**, **S26** and **S210**. See Economy hangers for load specifications.

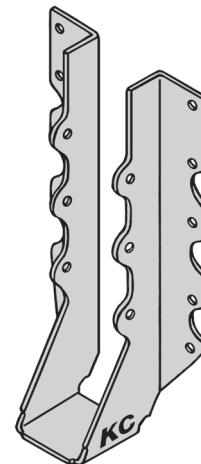
Skewed and Sloped Hangers . . are available, specify angle (67½° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering design.



Top View - Skewed Left



Typical Design for **S24**,
S26, **S210** and **S214**



SSL

STANDARD SKEWED HANGERS (45°) MEDIUM SKEWED HANGERS (45°)

Design Features . . standard and medium skewed hangers are offered to promote further standardization and construction economies, and to provide compatibility with the **KC® SUPERSPEED®** line of **S** standard and **H** heavy joist hangers.

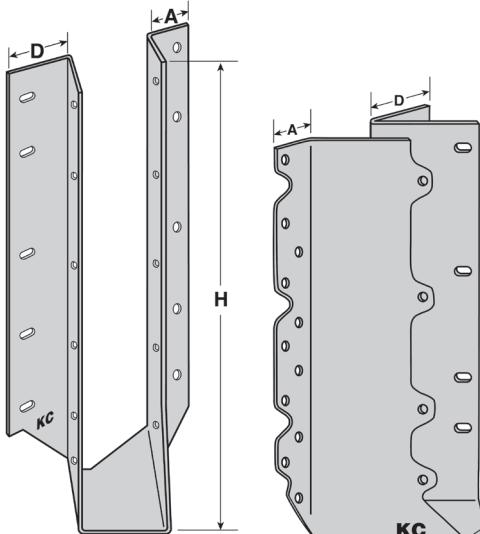
- **Joist sizes** . . 2xs, 3xs, 4xs and double 2xs.

SSL/SSR – 16 ga. galvanized steel.

MSL/MSR – 14 ga. galvanized steel.

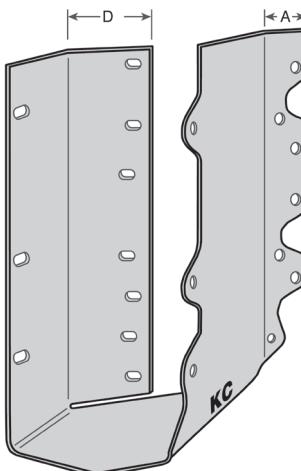
Loads . . larger seat-bearing and designed direct nailing provide proper installation of all nails into joist hangers.

Special . . skewed hangers are labor savers. No angle butt-cuts are required. Reversed flanges are available in the **SSL/SSR** and **MSL/MSR** hangers furnished with one flange turned in while the other remains out.



SSL210

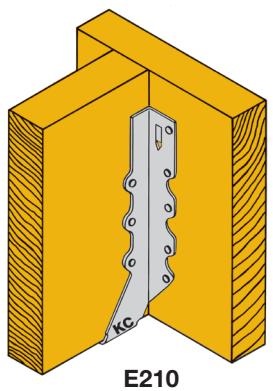
MSR



SSL410R
(Reversed Flange)

JOIST HANGERSFor Product Substitutions . . . the **ONLY APPROVED EQUAL™**

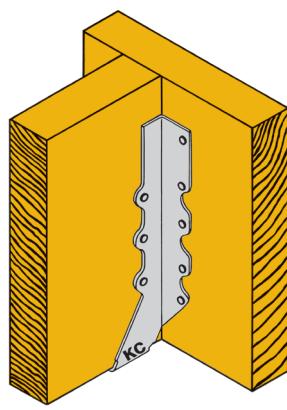
KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		(HEADER) DESIGN LOAD				UPLIFT LBS	
			A	D	W	H	HEADER	JOIST	10D		16D			
									NORMAL LBS	MAX LBS	NORMAL LBS	MAX LBS		
E24	LU24	2 x 4 to 2 x 6	1½	1½	1¾	3	4-16d	2-10d x 1½	465	575	555	685	250	
E26	LU26	2 x 6 to 2 x 10	1½	1½	1¾	4¾	6-16d	4-10d x 1½	700	860	835	1030	500	
E28	LU28	2 x 8 to 2 x 12	1½	1½	1¾	6¼	8-16d	6-10d x 1½	930	1150	1110	1340	750	
E210	LU210	2 x 10 to 2 x 14	1½	1½	1¾	7½	10-16d	6-10d x 1½	1165	1435	1390	1715	750	
												BONUS LOADS WITH 16D NAILS		



E210

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

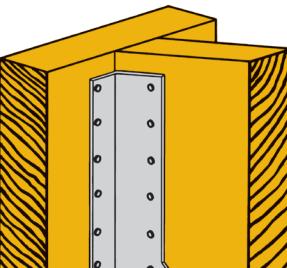
KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			A	D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
S24	U24	2 x 4	1½	1½	1¾	3	4-10d	2-10d x 1½	485	595	265
S26	U26	2 x 6 to 2 x 10	1½	1½	1¾	4¾	6-10d	4-10d x 1½	730	890	585
S210	U210	2 x 6 to 2 x 14	1½	1½	1¾	7½	10-10d	6-10d x 1½	1215	1485	850
S214	U214	2 x 14 to 2 x 16	1½	2	1¾	10	12-16d	8-10d x 1½	1355	1695	1265
S34	U34	3 x 4 to 3 x 6	1½	2	2¾	3¾	4-16d	2-10d x 1½	540	675	300
S36	U36	3 x 6 to 3 x 10	1½	2	2¾	5¾	8-16d	4-10d x 1½	1080	1350	605
S310	U310	3 x 10 to 3 x 14	1½	2	2¾	8¾	14-16d	6-10d x 1½	1890	2365	905
S314	U314	3 x 14 to 3 x 16	1½	2	2¾	10¾	16-16d	6-10d x 1½	2160	2700	905
S44	U44	4 x 4 to 4 x 6	1½	2	3¾	2¾	4-16d	2-10d	540	675	300
S46	U46	4 x 6 to 4 x 10	1½	2	3¾	4¾	8-16d	4-10d	1080	1350	605
S410	U410	4 x 10 to 4 x 14	1½	2	3¾	8¾	14-16d	6-10d	1890	2365	905
S414	U414	4 x 14 to 4 x 16	1½	2	3¾	10	16-16d	6-10d	2160	2700	905
S66	U66	6 x 6 to 6 x 8	1½	2	5½	5	8-16d	4-10d	1080	1350	605
S610	U610	6 x 10	1½	2	5½	8½	14-16d	6-10d	1890	2365	905
S24-2	U24-2	(2) 2 x 4 to (2) 2 x 6	1½	2	3½	3	4-16d	2-10d	540	675	300
S26-2	U26-2	(2) 2 x 6 to (2) 2 x 10	1½	2	3½	5	8-16d	4-10d	1080	1350	605
S210-2	U210-2	(2) 2 x 10 to (2) 2 x 14	1½	2	3½	8	14-16d	6-10d	1890	2365	905
S26-3	U26-3	(3) 2 x 6 to (3) 2 x 10	1½	2	4½	5	8-16d	4-10d	1080	1350	605
S210-3	U210-3	(3) 2 x 10 to (3) 2 x 14	1½	2	4½	8½	14-16d	6-10d	1890	2365	905



S210

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			A	D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
SSL/SSR24	SUL/SUR24	2 x 4	1½	1½	1¾	3½	4-16d	4-10d x 1½	575	705	450
SSL/SSR26	SUL/SUR26	2 x 6 to 2 x 10	1½	1½	1¾	5	6-16d	6-10d x 1½	865	1055	765
SSL/SSR210	SUL/SUR210	2 x 10 to 2 x 14	1½	1½	1¾	8½	10-16d	10-10d x 1½	1440	1760	1265
SSL/SSR214	SUL/SUR214	2 x 14 to 2 x 16	1½	1½	1¾	10	12-16d	12-10d x 1½	1730	2115	2165
SSL/SSR36	SUL/SUR36	3 x 6 to 3 x 10	1½	2¾	2¾	5¼	8-16d	4-16d x 2½	1080	1350	720
SSL/SSR310	SUL/SUR310	3 x 10 to 3 x 14	1½	2¾	2¾	9	14-16d	6-16d x 2½	1890	2365	1080
SSL/SSR314	SUL/SUR314	3 x 14 to 3 x 16	1½	2¾	2¾	13	18-16d	8-16 x 2½	2430	3040	1440
SSL/SSR46	SUL/SUR46	4 x 6 to 4 x 10	1½	2¾	3¾	4¾	8-16d	4-16d	1150	1400	815
SSL/SSR410	SUL/SUR410	4 x 10 to 4 x 14	1½	2¾	3¾	8½	14-16d	6-16d	2015	2465	1300
SSL/SSR414	SUL/SUR414	4 x 14 to 4 x 16	1½	2¾	3¾	12½	18-16d	8-16d	2500	3040	1765
MSL/MSR36	HSUL/HSUR36	3 x 6 to 3 x 10	1½	2¾	2¾	5¼	12-16d	4-16d x 2½	1630	2040	720
MSL/MSR310	HSUL/HSUR310	3 x 10 to 3 x 14	1½	2¾	2¾	9	20-16d	6-16d x 2½	2720	3400	1080
MSL/MSR314	HSUL/HSUR314	3 x 14 to 3 x 16	1½	2¾	2¾	13	26-16d	8-16d x 2½	3535	4420	1440
MSL/MSR46	HSUL/HSUR46	4 x 6 to 4 x 10	1½	2¾	3¾	4¾	12-16d	4-16d	1630	2040	720
MSL/MSR410	HSUL/HSUR410	4 x 10 to 4 x 14	1½	2¾	3¾	8½	20-16d	6-16d	2720	3400	1080
MSL/MSR414	HSUL/HSUR414	4 x 14 to 4 x 16	1½	2¾	3¾	12½	26-16d	8-16d	3535	4420	1440
SSL/SSR26-2	SUL/SUR26-2	(2) 2 x 6 to (2) 2 x 10	1½	2¾	3½	4½	8-16d	4-16d x 2½	1150	1400	815
SSL/SSR210-2	SUL/SUR210-2	(2) 2 x 10 to (2) 2 x 14	1½	2¾	3½	8½	14-16d	6-16d x 2½	2015	2465	1300
SSL/SSR214-2	SUL/SUR214-2	(2) 2 x 14 to (2) 2 x 16	1½	2¾	3½	12½	18-16d	8-16d x 2½	2500	3040	1765
MSL/MSR26-2	HSUL/HSUR26-2	(2) 2 x 6 to (2) 2 x 10	1½	2¾	3½	4½	12-16d	4-16d x 2½	1785	2000	815
MSL/MSR210-2	HSUL/HSUR210-2	(2) 2 x 10 to (2) 2 x 14	1½	2¾	3½	8½	20-16d	6-16d x 2½	2975	3610	1300
MSL/MSR214-2	HSUL/HSUR214-2	(2) 2 x 14 to (2) 2 x 16	1½	2¾	3½	12½	26-16d	8-16d x 2½	3870	4695	1795



SSR214

SSL
SSR
MSL
MSR

LS**LIGHT SLOPED HANGERS**

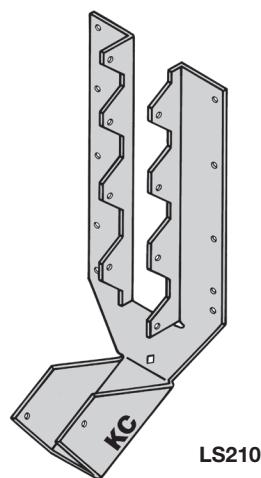
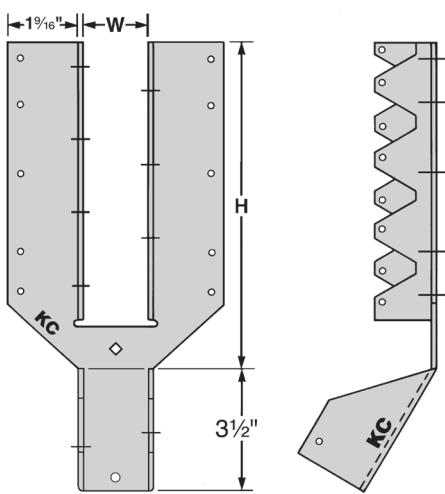
Design Features . . used on existing structures to increase strength for the attachment of joists to headers. Slip the hanger into place and adjust the seat (sloped either up or down). Use the hole in the bottom of the seat to set the hanger to the joist. Complete nailing to the header flanges or use for new construction needs. These hangers offer complete installation flexibility before, during or after joists are erected.

- **Joist sizes** . . 2xs

Material . . 18 ga. galvanized steel.

Loads . . larger seat-bearing and designed direct nailing provide proper installation of all nails into joist hangers.

Special . . the **LS** eliminates slope hanger mix-ups and delays (any slope up or down, to and including, $\frac{1}{12}$ pitch).

**LS210****LSS****LIGHT SLOPED/SKEWED HANGERS**

Design Features . . combination sloped skewed hangers offer further standardization and construction economy. They also provide compatibility with the **KC® SUPERSPEED®** line of **S** standard joist hangers. **LSS** hangers can be used to connect rafters to ridge beams in vaulted roof structures.

- **Joist sizes** . . 2xs, 3xs, 4xs, double 2x-s and wood I-joist sizes.

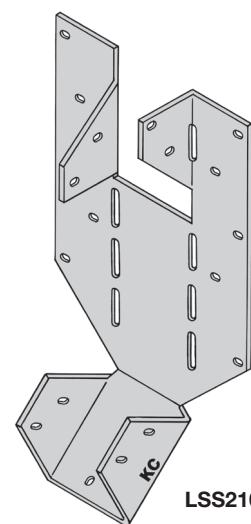
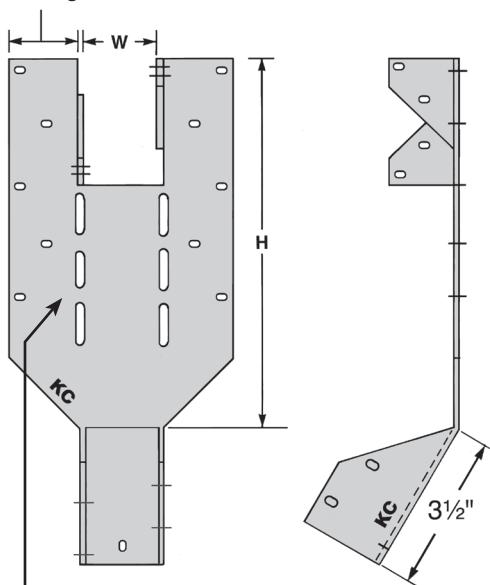
Material . . 18 ga., 16 ga., and 14 ga. galvanized steel.

Loads . . larger seat-bearing and designed direct nailing provide proper installation of all nails into joist hangers.

Special . . **LSS** eliminates skewed and sloped hanger mix-ups and delays (any slope up or down, to and including, a $\frac{1}{12}$ pitch and any skew right or left up to 45°).

Ordering/Specifying Information . . The **LSS5.12** must be factory skewed 0° to 45° . It may be field skewed to 45° . (**LSS4.12** and **LSS3510-2** are similar)

**Configurations of some models
may differ from those shown.**

A Flange**LSS210**

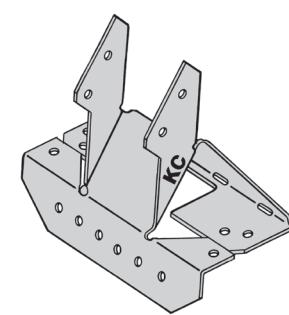
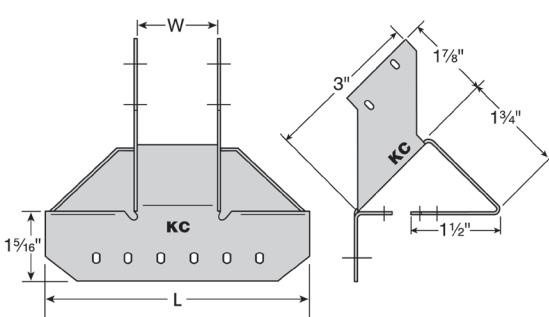
**Slotted Holes Are
Provided for Skewable
Field Bending Application**

SSC**SLOPED SEAT CONNECTORS**

Design Features . . allow fastening of solid and wood I-joints to the plate at any slope from 1:12 to 6:12. The **SSC** eliminates the need for costly rafter notching, bevel plates and toe-nailing. Install twelve nails to the plate and four to the joist.

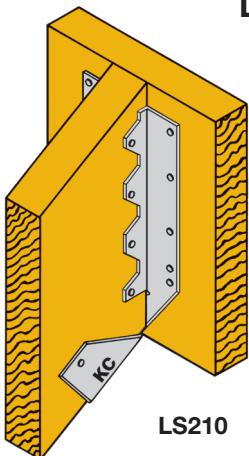
Material . . 18 ga. galvanized steel.

Special . . the **SSC** was developed for wood I-joist beams to eliminate the need for bird cuts in the bottom chord.

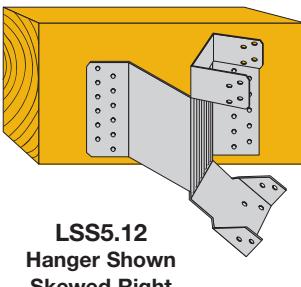
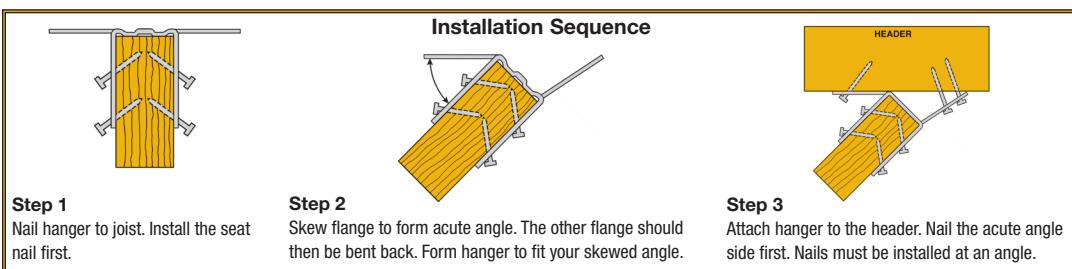
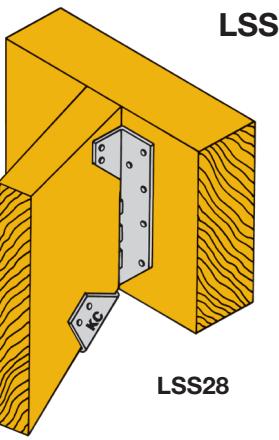
**SSC2**

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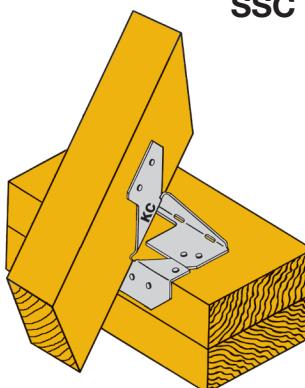
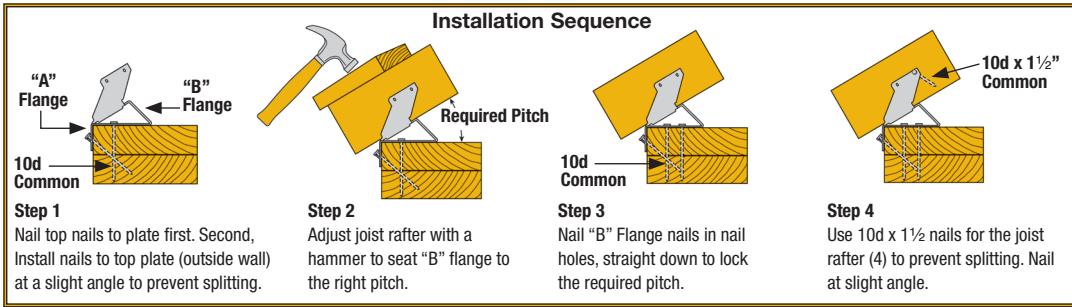
KC® STK NO	JOIST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD/ SLOPE ONLY		UPLIFT LBS
		WIDTH	HEIGHT	HEADER	JOIST	NORMAL LBS	MAXIMUM LBS	
LS26	2 X 6	1 1/16	5	6-10d	7-10d x 1 1/2	670	835	835
LS28	2 X 8	1 1/16	6 1/4	8-10d	9-10d x 1 1/2	895	1005	1005
LS210	2 X 10	1 1/16	8 1/2	10-10d	11-10d x 1 1/2	1120	1400	1390

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL	JOIST SIZE	DIMENSIONS (INCHES)		"A" FLANGE	NAIL SCHEDULE		DESIGN LOAD (LBS)			
				WIDTH	HEIGHT		HEADER	JOIST	SLOPE ONLY	NORMAL	MAXIMUM	UPLIFT LBS
LSS26	LSU26	18	1 1/2	1 1/16	4 7/8	1 1/16	6-10d	5-10d x 1 1/2	670	835	670	840
LSS28	LSSU28	18	1 1/2	1 1/16	7 1/4	1 1/16	10-10d	5-10d x 1 1/2	1005	1005	985	985
LSS210	LSSU210	18	1 1/2	1 1/16	8 1/2	1 1/16	10-10d	9-10d x 1 1/2	1120	1400	1120	1390
LSS25	LSSU125	18	1 3/4	1 13/16	8 1/2	1 1/16	10-10d	9-10d x 1 1/2	1120	1400	1120	1390
LSS2.06	LSSU12.06	18	2	2 1/16	8 1/2	1 3/4	10-10d	7-10d x 1 1/2	1110	1390	995	1205
LSS2.1	LSSU2.1	18	2 1/16	2 1/8	8 1/2	1 3/4	10-10d	7-10d x 1 1/2	1110	1390	995	1205
LSS35	LSSU135	18	2 5/16	2 3/8	8 1/2	1 5/8	10-10d	7-10d x 1 1/2	1110	1390	995	1205
LSS310	LSSUH310	16	2 1/2	2 5/16	8 1/2	3 1/8	18-16d	12-10d x 1 1/2	2295	2295	1600	1600
LSS210-2	LSSU210-2	16	3	3 1/8	8 1/2	2 7/8	18-16d	12-10d x 1 1/2	2430	3035	2270	2270
LSS410	LSSU410	16	3 1/2	3 9/16	8 1/2	2 5/8	18-16d	12-10d x 1 1/2	2430	3035	2270	2270
LSS4.12	LSSU4.12	14	4	4 1/8	9	2 1/4	24-16d	16-10d x 1 1/2	3215	4020	2300	2300
LSS4.28	LSSU4.28	14	4 1/8	4 1/4	9	2 3/8	24-16d	16-10d x 1 1/2	3215	4020	2300	2300
LSS3510-2	LSSU3510-2	14	4 3/4	4 3/4	8 7/8	3 5/8	24-16d	16-10d x 1 1/2	3215	4030	2300	2300
LSS5.12	LSSU5.12	14	5	5 1/8	9	2 1/4	24-16d	16-10d x 1 1/2	3215	4030	2300	2300

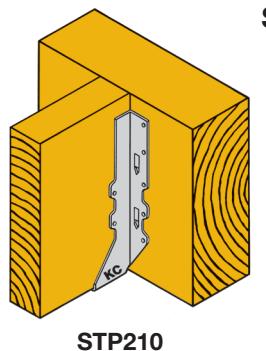
For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
		W	L	PLATE	RAFTER	NORMAL LBS	MAX LBS	
SSC2	VPA2	1 1/16	3 1/2	12-10d	4-10d x 1 1/2	1430	1790	250
SSC25	VPAI25	1 13/16	3 1/2	12-10d	4-10d x 1 1/2	1430	1790	250
SSC35	VPAI35	2 3/8	4 1/2	12-10d	4-10d x 1 1/2	1430	1790	250
SSC3	VPA3	2 5/16	4 1/2	12-10d	4-10d x 1 1/2	1430	1790	250
SSC4	VPA4	3 9/16	5 1/2	12-10d	4-10d x 1 1/2	1430	1790	250

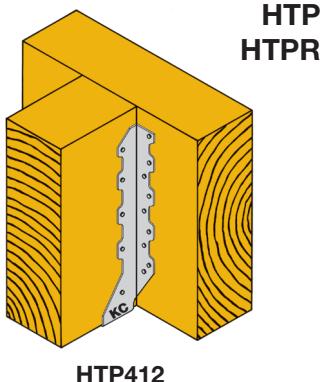


<p>STP STANDARD TRUSS PLATED HANGERS</p> <p>Design Features . . provide proper balance between load-carrying capacity of hanger and the truss it supports.</p> <ul style="list-style-type: none"> • Joist sizes . . 2xs, 3xs, 4xs, double 2xs, and triple 2xs. <p>Material . . 18 ga. galvanized steel.</p> <p>Loads . . seat dimension (see table) provides solid larger seat-bearing area. New higher loads possible with only common nails.</p> <p>Special . . greater strength combined with economical price and ease-of-nailing make these an ideal hanger for the competitive construction trade.</p> <p>Skewed and Sloped Hangers . . not available in STP series. See SSR/SSL or S series hangers, pages 8 and 9.</p>		<p>STP210</p> <div style="border: 1px solid black; padding: 5px;"> <p>"Slant Nailing" (Toe Nailing) Drive Full Length Common Nails at 45° into Joist for Header Connection</p> </div>
<p>HTP HEAVY TRUSS PLATED HANGERS</p> <p>Design Features . . constant dimensional accuracy and precision controlled 90° angles assure proper joist bearing (flat seat) and header connection alignment. Two design styles are available with standard or reversed flanges (turned inward).</p> <ul style="list-style-type: none"> • Joist sizes . . 4xs and double 2xs. <p>Material . . 14 ga. galvanized steel.</p> <p>Loads . . 2" seat dimension provides solid larger seat-bearing area. New higher loads possible with only common nails.</p> <p>Skewed and Sloped Hangers . . not available in HTP series. See MSL/MSR series, pages 8 and 9 or H series, pages 16 and 17.</p>		<p>HTP412</p> <div style="border: 1px solid black; padding: 5px;"> <p>"Slant Nailing" (Toe Nailing) Drive Full Length Common Nails at 45° into Joist for Header Connection</p> </div>
<p>HTPTF HEAVY TRUSS PLATED TOP FLANGE HANGERS</p> <p>Design Features . . with the addition of a top flange, the heavy truss hanger meets or exceeds specifications for schools and public buildings, where strength, support, and safety are prime requirements. Two design styles are available with standard or reversed flanges (turned inward).</p> <ul style="list-style-type: none"> • Joist sizes . . 4xs and double 2xs. <p>Material . . 14 ga. galvanized steel.</p> <p>Special . . greater strength combined with economical price and ease-of-nailing make these an ideal hanger for the competitive construction trade.</p> <p>Skewed and Sloped Hangers . . not available in HTPTF series. See HTF series, pages 18 and 19.</p>		<p>HTPTF414</p> <div style="border: 1px solid black; padding: 5px;"> <p>"Slant Nailing" (Toe Nailing) Drive Full Length Common Nails at 45° into Joist for Header Connection</p> </div>
<p>HDTP HEAVY-DUTY TRUSS PLATED HANGERS</p> <p>Design Features . . HDTP universal face-mount hanger is designed for wood plate trusses and heavily loaded members.</p> <ul style="list-style-type: none"> • Joist sizes . . 2xs, 4xs, double 2xs, triple 2xs, and quad 2xs. <p>Material . . HDTP2x – 16 ga. galvanized steel. HDTP4x, 2x-2 – 14 ga. galvanized steel.</p> <p>Loads . . 3" seat dimension provides the greatest bearing area of any hanger available. Super capacity design loads are the highest of any universal face-mounted hanger.</p> <p>Special . . larger header flange and joist seat make this hanger very easy to install with common nails.</p> <p>Skewed and Sloped Hangers . . (see page 43).</p>		<p>HDTP210</p> <div style="border: 1px solid black; padding: 5px;"> <p>"Slant Nailing" (Toe Nailing) Drive Full Length Common Nails at 45° into Joist for Header Connection</p> </div>

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
STP24	LUS24	2 x 4	1 3/4	1 1/16	3 1/8	4-10d	2-10d	640	800	465
STP26	LUS26	2 x 6, 8	1 3/4	1 1/16	4 1/4	6-10d	4-10d	1055	1320	930
STP28	LUS28	2 x 8, 10	1 3/4	1 1/16	6 1/8	8-10d	4-10d	1275	1595	930
STP210	LUS210	2 x 10, 12, 14	1 3/4	1 1/16	7 13/16	10-10d	4-10d	1500	1875	930
STP24-2	LUS24-2	(2) 2 x 4	2	3 1/8	3 1/8	4-16d	2-16d	765	880	465
STP26-2	LUS26-2	(2) 2 x 6, 8	2	3 1/8	4 1/4	8-16d	4-16d	1450	1810	1140
STP28-2	LUS28-2	(2) 2 x 8	2	3 1/8	7	12-16d	6-16d	2215	2765	1710
STP28-3	LUS28-3	(3) 2 x 8, 10, 12	2	4 1/8	6 1/4	12-16d	6-16d	2215	2765	1710
STP210-2	LUS210-2	(2) 2 x 10, 12	2	3 1/8	9	16-16d	8-16d	3025	3780	2070
STP214-2	LUS214-2	(2) 2 x 14	2	3 1/8	10 15/16	20-16d	10-16d	3150	3940	2585
STP44	LUS44	4 x 4	2	3 1/16	3	4-16d	2-16d	765	880	465
STP46	LUS46	4 x 6, 8	2	3 1/16	4 1/4	8-16d	4-16d	1450	1810	1140
STP48	LUS48	4 x 8	2	3 1/16	6 1/4	12-16d	6-16d	2215	2765	1710
STP410	LUS410	4 x 10, 12, 14	2	3 1/16	8 1/4	16-16d	8-16d	3025	3780	2070
STP414	LUS414	4 x 12, 14	2	3 1/16	10 3/4	20-16d	10-16d	3150	3940	2585

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

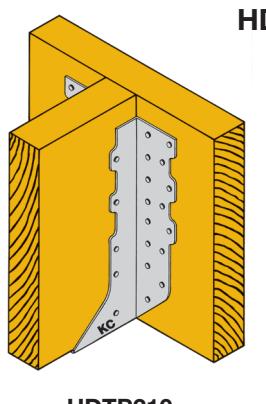
KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
HTP26-2	HUS26-2	(2) 2 x 6	2	3 1/8	5 5/16	8-16d	4-16d	1550	1940	1080
HTP28-2	HUS28-2	(2) 2 x 8	2	3 1/8	7 9/16	12-16d	6-16d	2325	2905	1620
HTP210-2	HUS210-2	(2) 2 x 10	2	3 1/8	9 9/16	16-16d	8-16d	3105	3880	2160
HTP212-2	HUS212-2	(2) 2 x 12	2	3 1/8	10 1/4	20-16d	10-16d	3875	4040	2560
HTP46	HUS46	4 x 6	2	3 1/16	5	8-16d	4-16d	1070	1340	1235
HTP48	HUS48	4 x 8	2	3 1/16	7	12-16d	6-16d	2170	2170	1550
HTP410	HUS410	4 x 10	2	3 1/16	9	16-16d	8-16d	2170	2170	3295

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
HTPTF26-2	HUS26-2TF	(2) 2 x 6	2	3 1/8	5 3/8	2 1/2	10-16d	4-16d	2900	3015	1080
HTPTF28-2	HUS28-2TF	(2) 2 x 8	2	3 1/8	7 1/4	2 1/2	12-16d	6-16d	3500	3900	1620
HTPTF210-2	HUS210-2TF	(2) 2 x 10	2	3 1/8	9 1/4	2 1/2	16-16d	8-16d	3590	4200	2160
HTPTF212-2	HUS212-2TF	(2) 2 x 12	2	3 1/8	11 1/8	2 1/2	20-16d	10-16d	4475	5000	2855
HTPTF214-2	HUS214-2TF	(2) 2 x 14	2	3 1/8	13 1/8	2 1/2	24-16d	10-16d	4790	5315	2855
HTPTF46	HUS46TF	4 x 6	2	3 1/16	5 3/8	2 1/2	10-16d	4-16d	2900	3015	1080
HTPTF48	HUS48TF	4 x 8	2	3 1/16	7 1/4	2 1/2	12-16d	6-16d	3500	3900	1620
HTPTF410	HUS410TF	4 x 10	2	3 1/16	9 1/4	2 1/2	16-16d	8-16d	3590	4200	2160
HTPTF412	HUS412TF	4 x 12	2	3 1/16	11 1/8	2 1/2	20-16d	10-16d	4475	5000	2855
HTPTF414	HUS414TF	4 x 14	2	3 1/16	13 1/8	2 1/2	24-16d	10-16d	4790	5315	2855

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
HDTP26	HUS26	2 X 6, 8	3	1 1/8	5 1/8	14-16d	6-16d	2720	3335	1620
HDTP28	HUS28	2 X 8, 10	3	1 1/8	7	22-16d	8-16d	3965	4220	2160
HDTP210	HUS210	2 X 10, 12	3	1 1/8	9	30-16d	10-16d	4255	4575	3000
HDTP26-2	HHUS26-2	(2) 2 X 6 truss	3	3 1/16	5	14-16d	6-16d	2580	3225	1620
HDTP28-2	HHUS28-2	(2) 2 X 8 truss	3	3 1/16	7	22-16d	8-16d	3885	4885	2160
HDTP210-2	HHUS210-2	(2) 2 x 10 truss	3	3 1/16	9	30-16d	10-16d	5190	5945	2855
HDTP210-3	HHUS210-3	(3) 2 x 10 truss	3	4 1/16	9	30-16d	10-16d	5190	5945	2855
HDTP210-4	HHUS210-4	(4) 2 x 10 truss	3	6 1/8	9	30-16d	10-16d	5190	5945	2855
HDTP46	HHUS46	4 x 6 truss	3	3 1/8	5 1/8	14-16d	6-16d	2790	4265	1620
HDTP48	HHUS48	2 x 8 truss	3	3 1/8	7	22-16d	8-16d	4215	6440	2160
HDTP410	HHUS410	4 x 10 truss	3	3 1/8	9	30-16d	10-16d	5635	7165	3745
HDTP5.50/10	HHUS5.50/10	5.50 X 10	3	5.50	9	30-16d	10-16d	5635	6880	3735



HHDTP HEAVY HEAVY-DUTY TRUSS PLATED HANGERS

Design Features . . HHDTP universal face-mount hanger is designed for wood plate trusses and heavily loaded members.

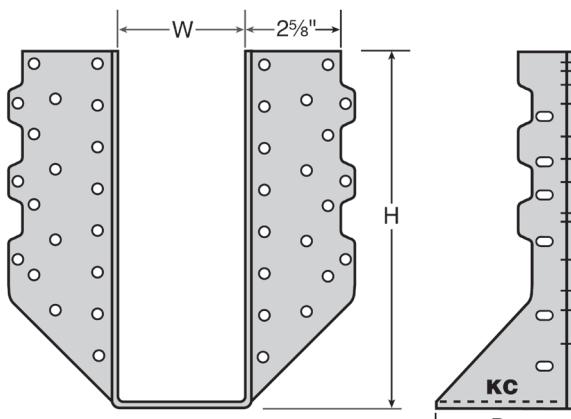
- **Joist sizes . .** 2xs, 4xs, double 2xs, triple 2xs, 6x and 8xs.
- **PSL or LVL Sizes . .** HHDTP available in 2 $\frac{3}{4}$ " and 7 $\frac{1}{4}$ " widths.
- **GluLam Sizes . .** HHDTP available in 3 $\frac{1}{8}$ " and 5 $\frac{1}{8}$ " widths.

Material . . HHDTP 12 ga. galvanized steel.

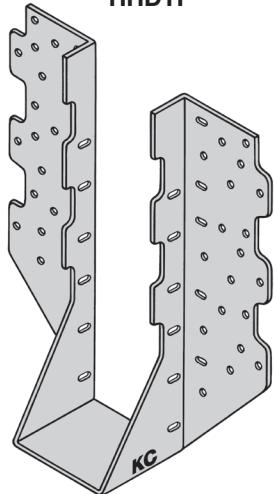
Loads . . 4" and 5" seat dimension provides greatest bearing area of any hanger available. Super capacity design loads are the highest of any universal face-mounted hanger.

Special . . larger header flange and joist seat make this hanger very easy to install with common nails.

Skewed Hangers . . (see page 43).



HHDTP



HRQ

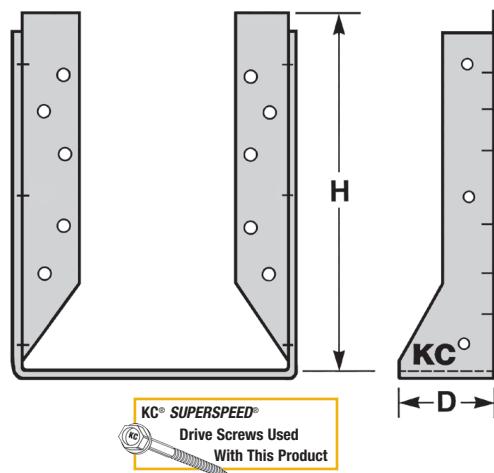
HEAVY REVERSE JOIST HANGERS QUICK (DRIVE SCREW)

Design Features . . HRQ universal face-mount hanger with reversed face flanges (turned in) is designed for structural composite lumber or heavy lumber beams. This hanger is designed for installation on posts or header connections.

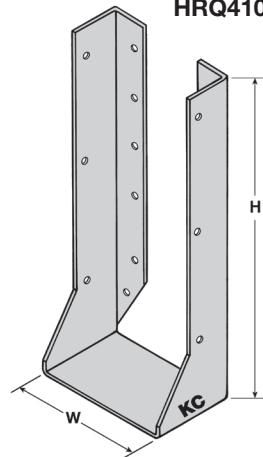
- **Joist sizes . .** 3xs, 4xs, 6xs, double 2xs, and triple 2xs . . also available on special order for rough beam and Glulam sizes. When ordering, specify the W, D and H dimensions.

Material . . 14 ga. galvanized steel.

Loads . . 3" seat dimension provides greater seat bearing area than the "H" heavy hanger. The addition of KC® SUPERSPEED® Drive Screws SDS 1/4x2 1/2 (included with product) gives this hanger almost two (2) times greater load value than the stock 'H' heavy Hanger (16d nailing) with less fasteners.



HRQ410



HDTPO

HEAVY HEAVY-DUTY TRUSS PLATED HANGERS QUICK (DRIVE SCREW)

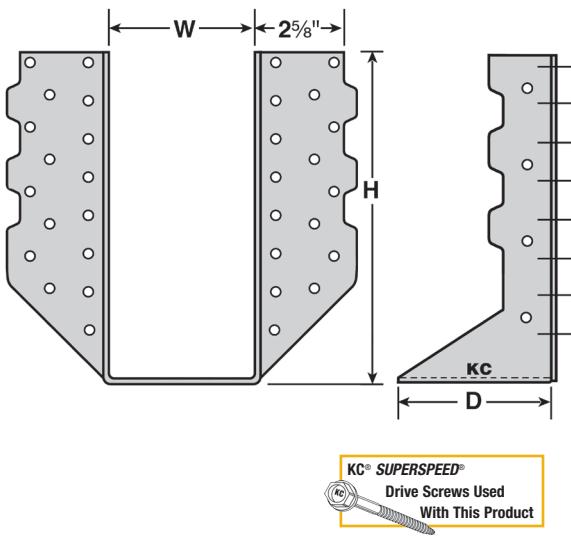
Design Features . . HHDTPQ universal face-mount hanger is very similar to the HHDTP hanger except that it is fastened to wood header members and to multi-ply girder trusses with the use of KC® SUPERSPEED® drive screws.

- **Joist sizes . .** (2) 2 Ply
(3) 2 Ply
(4) 2 Ply
4 x Girder

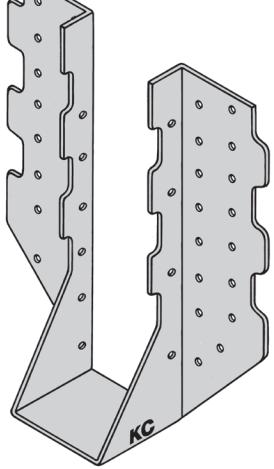
• Special sizes made to order.

Material . . HHDTPQ 12 ga. galvanized steel.
Loads . . 4" seat dimension provides greatest bearing area of any hanger available. Super capacity design loads are the highest of any universal face-mounted hanger.

Special . . larger header flange and joist seat make this hanger very easy to install with the KC® SUPERSPEED® drive screws for faster and easier installation compared to common nails.

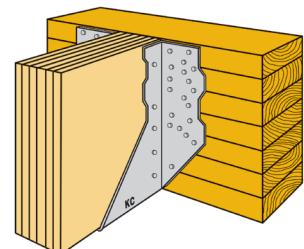


HHDTPQ

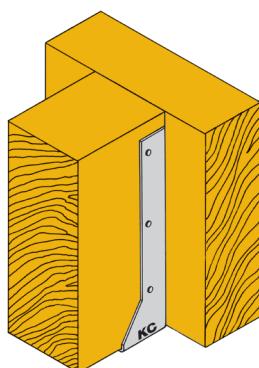


HHDTP

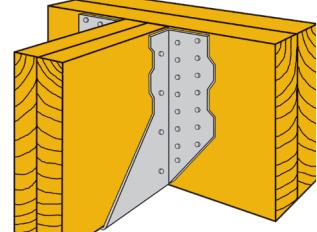
KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
HHDT26	HGUS26	2 x Truss	5	1 1/8	5 3/8	20-16d	8-16d	3775	3775	1800
HHDT26-2	HGUS26-2	(2) 2 x Truss	4	3 7/16	5 3/8	20-16d	8-16d	4070	5025	2575
HHDT28	HGUS28	2 x Truss	5	1 1/8	7 1/16	36-16d	12-16d	5800	5800	3020
HHDT28-2	HGUS28-2	(2) 2 x Truss	4	3 7/16	7 1/16	36-16d	12-16d	6975	8010	3300
HHDT210-2	HGUS210-2	(2) 2 x Truss	4	3 7/16	9 1/16	46-16d	16-16d	9010	9010	3875
HHDT26-3	HGUS26-3	(3) 2 x Truss	4	4 15/16	4 1/2	20-16d	8-16d	4070	5025	2575
HHDT28-3	HGUS28-3	(3) 2 x Truss	4	4 15/16	7 1/8	36-16d	12-16d	6975	8010	3300
HHDT210-3	HGUS210-3	(3) 2 x Truss	4	4 15/16	9 1/8	46-16d	16-16d	9010	9010	3875
HHDT212-3	HGUS212-3	(3) 2 x Truss	4	4 15/16	10 1/8	56-16d	20-16d	9505	9505	4110
HHDT214-3	HGUS214-3	(3) 2 x Truss	4	4 15/16	12 1/8	66-16d	22-16d	10230	10230	5700
HHDT2.75/10	HGUS2.75/10	2 3/4	4	2 3/4	8 15/16	46-16d	16-16d	9010	9010	3875
HHDT2.75/12	HGUS2.75/12	2 3/4	4	2 3/4	10 3/16	56-16d	20-16d	9505	9505	4110
HHDT2.75/14	HGUS2.75/14	2 3/4	4	2 3/4	12 15/16	66-16d	22-16d	10230	10230	5700
HHDT3.25/10	HGUS3.25/10	3 1/8	4	3 1/4	8 5/8	46-16d	16-16d	9010	9010	3875
HHDT3.25/12	HGUS3.25/12	3 1/8	4	3 1/4	10 3/8	56-16d	20-16d	9505	9505	4110
HHDT46	HGUS46	4 x Truss	4	3 5/8	4 1/16	20-16d	8-16d	4070	5025	2575
HHDT48	HGUS48	4 x Truss	4	3 5/8	7 1/16	36-16d	12-16d	6975	8010	3300
HHDT410	HGUS410	4 x Truss	4	3 5/8	8 7/16	46-16d	16-16d	9010	9010	3875
HHDT412	HGUS412	4 x Truss	4	3 5/8	10 7/16	56-16d	20-16d	9505	9505	4110
HHDT414	HGUS414	4 x Truss	4	3 5/8	12 7/16	66-16d	22-16d	10230	10230	5700
HHDT5.25/10	HGUS5.25/10	5 1/8	4	5 1/4	9 1/16	46-16d	16-16d	9010	9010	3875
HHDT5.25/12	HGUS5.25/12	5 1/8	4	5 1/4	10 3/16	56-16d	20-16d	9505	9505	4110
HHDT5.50/10	HGUS5.50/10	5 1/2	4	5 1/2	8 15/16	46-16d	16-16d	9010	9010	3875
HHDT5.50/12	HGUS5.50/12	5 1/2	4	5 1/2	10 1/2	56-16d	20-16d	9505	9505	4110
HHDT5.50/14	HGUS5.50/14	5 1/2	4	5 1/2	12 1/2	66-16d	22-16d	10230	10230	5700
HHDT6.88/10	HGUS6.88/10	6 3/4	4	6 7/8	8 13/16	46-16d	16-16d	9010	9700	3875
HHDT6.88/12	HGUS6.88/12	6 3/4	4	6 7/8	10 3/16	56-16d	20-16d	9950	9950	4110
HHDT6.88/14	HGUS6.88/14	6 3/4	4	6 7/8	12 13/16	66-16d	22-16d	11275	11275	5700
HHDT7.25/12	HGUS7.25/12	7 1/8	4	7 1/4	10 7/16	56-16d	20-16d	9950	9950	4110
HHDT7.25/14	HGUS7.25/14	7 1/8	4	7 1/4	12 7/16	66-16d	22-16d	11275	11275	5700

**HHDT5.50/10**For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			KC® SUPERSPEED® SDS 1/4" DRIVE SCREWS		DESIGN LOAD		UPLIFT LBS 133%
			D	W	H	CARRYING MEMBER	CARRIED MEMBER	NORMAL LBS 100%	MAX LBS 125%	
HRQ310	HUCQ310-SDS	3 x 10	3	2 9/16	9	(8) 1/4 x 2 1/2	(4) 1/4 x 2 1/2	3120	3900	1370
HRQ210-2	HUCQ210-2-SDS	(2) 2 x 10	3	3 1/4	9	(12) 1/4 x 2 1/2	(6) 1/4 x 2 1/2	4680	4955	2510
HRQ410	HUCQ410-SDS	4 x 10	3	3 9/16	9	(12) 1/4 x 2 1/2	(6) 1/4 x 2 1/2	4680	4955	2510
HRQ412	HUCQ412-SDS	4 x 12	3	3 9/16	11	(14) 1/4 x 2 1/2	(6) 1/4 x 2 1/2	5460	5560	2510
HRQ210-3	HUCQ210-3-SDS	(3) 2 x 10	3	4 5/8	9	(12) 1/4 x 2 1/2	(6) 1/4 x 2 1/2	4680	4955	2510
HRQ610	HUCQ610-SDS	6 x 10	3	5 1/2	9	(12) 1/4 x 2 1/2	(6) 1/4 x 2 1/2	4680	5715	2520
HRQ612	HUCQ612-SDS	6 x 12	3	5 1/2	11	(14) 1/4 x 2 1/2	(6) 1/4 x 2 1/2	4680	5715	2520

**HRQ410**For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			KC® SUPERSPEED® SDS 1/4" DRIVE SCREWS		DESIGN LOAD		UPLIFT LBS 133%
			D	W	H	CARRYING MEMBER	CARRIED MEMBER	NORMAL LBS 100%	MAX LBS 125%	
HHDTQ26-2	HGUQ26-2	(2) 2 x PLY	4	3 7/16	5	(12) 1/4 x 3	(4) 1/4 x 3	3710	4635	1645
HHDTQ28-2	HGUQ28-2	(2) 2 x PLY	4	3 7/16	7	(20) 1/4 x 3	(6) 1/4 x 3	6180	7725	2465
HHDTQ210-2	HGUQ210-2	(2) 2 x PLY	4	3 7/16	9	(28) 1/4 x 3	(8) 1/4 x 3	7750	7750	3285
HHDTQ26-3	HGUQ26-3	(3) 2 x PLY	4	5 1/8	5 1/8	(12) 1/4 x 4 1/2	(4) 1/4 x 4 1/2	3710	4635	1645
HHDTQ28-3	HGUQ28-3	(3) 2 x PLY	4	5 1/8	7 1/8	(20) 1/4 x 4 1/2	(6) 1/4 x 4 1/2	6180	7725	2465
HHDTQ210-3	HGUQ210-3	(3) 2 x PLY	4	5 1/8	9 1/8	(28) 1/4 x 4 1/2	(8) 1/4 x 4 1/2	8650	9790	3285
HHDTQ26-4	HGUQ26-4	(4) 2 x PLY	4	6 1/16	5 5/16	(12) 1/4 x 6	(4) 1/4 x 6	3710	4635	1645
HHDTQ28-4	HGUQ28-4	(4) 2 x PLY	4	6 1/16	7 5/16	(20) 1/4 x 6	(6) 1/4 x 6	6180	7725	2465
HHDTQ210-4	HGUQ210-4	(4) 2 x PLY	4	6 1/16	9 5/16	(28) 1/4 x 6	(8) 1/4 x 6	8650	10600	3285
HHDTQ46	HGUQ46	4 x GIRDER	4	3 1/8	4 1/8	(12) 1/4 x 3	(4) 1/4 x 3	3710	4635	1645
HHDTQ48	HGUQ48	4 x GIRDER	4	3 1/8	6 1/8	(20) 1/4 x 3	(6) 1/4 x 3	6180	7725	2465
HHDTQ410	HGUQ410	4 x GIRDER	4	3 1/8	8 1/8	(28) 1/4 x 3	(8) 1/4 x 3	7750	7750	3285

**HHDTQ 210-2**

H
HR

HEAVY JOIST HANGERS

Design Features . . constant dimensional accuracy and precision controlled 90° angles assure proper joist bearing (flat seat) and header connection and alignment. This design reliability is the result of KC® Metals using positive-control dies, automated machinery, skilled operators, and prime quality galvanized steel. Two design styles are available for application and load-bearing flexibility.

Stock No. Design Configuration

H () Standard

H () R Reversed face flange (turned in) for 3xs and larger joist sizes

Custom **H** hangers are available on special order with face flange configurations to suit a variety of special applications. New additional triangle nailing gives higher load values for the larger load requirements. Achieve your extra margin of safety without using **N20** nails, which may split the wood.

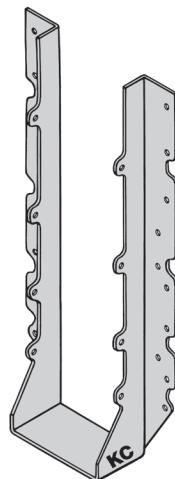
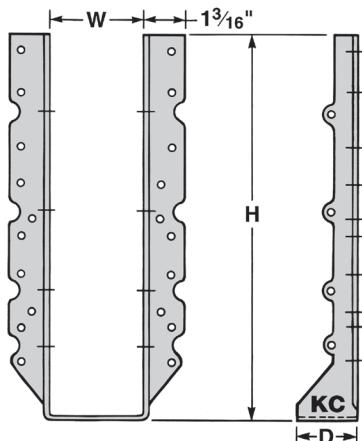
• **Joist sizes** . . 2xs, 3xs, 4xs, 6xs, 8xs, double 2xs and triple 2xs . . also available on special order for rough beam and glulam sizes. When ordering, specify the **W**, **D** and **H** dimensions.

Material . . 14 ga. galvanized steel. Stainless steel joist hangers are available for **H** (16 ga. austenitic nickel chromium stainless steel). Type 304 is a special order only.

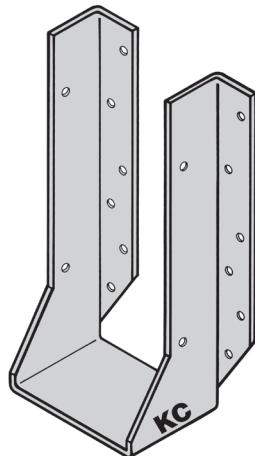
Loads . . nailing schedule and design load capacities are consistent with those obtained in independent laboratory tests. The new nailing schedule designated by triangle shaped holes produces increased load values. This additional nailing replaces the obsolete **HD** hangers. The values listed as "max" on the item table correspond to the **HD** load values shown in the ICC Evaluation Service Report 2929.

Special . . modified **H** hangers can be obtained with one flange turned inside, with both flanges in the same direction as the joist side, or with only one flange bent and one unbent for asymmetrical designs. Specify rights and lefts.

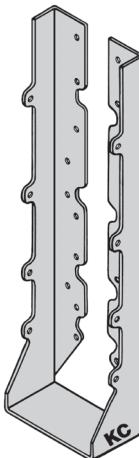
Skewed and Sloped Hangers . . (see page 43) available, specify angle (67½° max.) and whether left or right, up or down. Not available in **H()R** reversed flange styles. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.



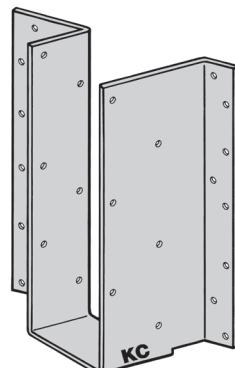
H416



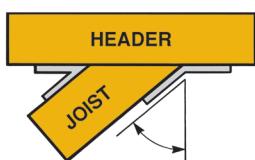
CUSTOM "H" HANGER



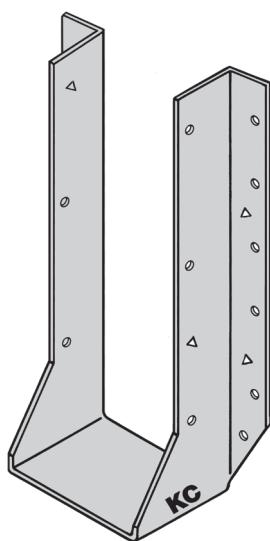
HR416 REVERSED



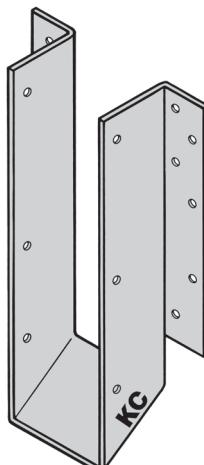
SKEWED LEFT



Top View - Skewed Left



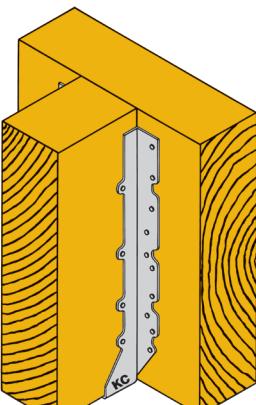
**"H" Hanger with Triangle Nailing
(Max Type Nailing)**



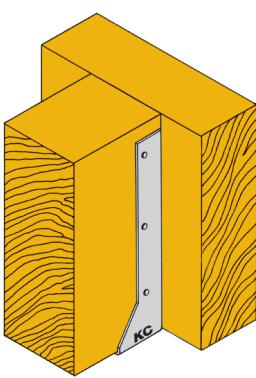
SLOPED DOWN

For Product Substitutions . . . the ***ONLY APPROVED EQUAL™***

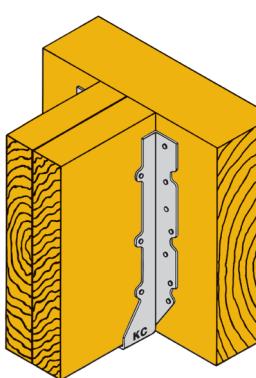
KC® STOCK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
H24/H26	HU24/HU26	2 x 4 / 2 x 6	2	1 ¹⁵ / ₁₆	3 ¹ / ₁₆	4-16d	2-10d x 1 ¹ / ₂	595	720	335
H28	HU28	2 x 8	2	1 ¹⁵ / ₁₆	5 ¹ / ₄	6-16d	4-10d x 1 ¹ / ₂	895	1085	610
H210	HU210	2 x 10	2	1 ¹⁵ / ₁₆	7 ¹ / ₄	8-16d	4-10d x 1 ¹ / ₂	1190	1445	610
H212	HU212	2 x 12	2	1 ¹⁵ / ₁₆	9 ¹ / ₈	10-16d	6-10d x 1 ¹ / ₂	1490	1805	1135
H214	HU214	2 x 14	2	1 ¹⁵ / ₁₆	10 ¹ / ₈	12-16d	6-10d x 1 ¹ / ₂	1785	2165	1135
H216	HU216	2 x 16	2	1 ¹⁵ / ₁₆	13	18-16d	8-10d x 1 ¹ / ₂	2680	3250	1515
H34	HU34	3 x 4	2	2 ¹ / ₁₆	3	4-16d	2-10d x 1 ¹ / ₂	595	720	380
H36	HU36	3 x 6	2	2 ¹ / ₁₆	5	8-16d	4-10d x 1 ¹ / ₂	1190	1445	610
H38	HU38	3 x 8	2	2 ¹ / ₁₆	6 ¹ / ₄	10-16d	4-10d x 1 ¹ / ₂	1490	1805	610
H310	HU310	3 x 10	2	2 ¹ / ₁₆	8 ¹ / ₈	14-16d	6-10d x 1 ¹ / ₂	2085	2530	915
H312	HU312	3 x 12	2	2 ¹ / ₁₆	10 ¹ / ₈	16-16d	6-10d x 1 ¹ / ₂	2380	2890	915
H314	HU314	3 x 14	2	2 ¹ / ₁₆	11 ¹ / ₈	18-16d	8-10d x 1 ¹ / ₂	2680	3250	1515
H316	HU316	3 x 16	2	2 ¹ / ₁₆	13 ¹ / ₈	20-16d	8-10d x 1 ¹ / ₂	2975	3610	1515
H44	HU44	4 x 4	2	3 ¹ / ₁₆	3	4-16d	2-10d	595	720	380
H46 max	HU46 max	4 x 6	2 ¹ / ₂	3 ¹ / ₁₆	5	12-16d	6-10d	1785	2165	1135
H48 max	HU48 max	4 x 8	2 ¹ / ₂	3 ¹ / ₁₆	6 ¹ / ₈	14-16d	6-10d	2085	2530	1135
H410 max	HU410 max	4 x 10	2 ¹ / ₂	3 ¹ / ₁₆	8 ¹ / ₈	18-16d	10-10d	2680	3250	1895
H412 max	HU412 max	4 x 12	2 ¹ / ₂	3 ¹ / ₁₆	10 ¹ / ₈	22-16d	10-10d	3275	3970	1895
H414 max	HU414 max	4 x 14	2 ¹ / ₂	3 ¹ / ₁₆	11 ¹ / ₈	24-16d	12-10d	3570	4335	2015
H416 max	HU416 max	4 x 16	2 ¹ / ₂	3 ¹ / ₁₆	13 ¹ / ₈	26-16d	12-10d	3870	4695	2015
H66 max	HU66 max	6 x 6	2 ¹ / ₂	5 ¹ / ₂	5 ¹ / ₈	12-16d	6-16d	1785	2165	1345
H68 max	HU68 max	6 x 8	2 ¹ / ₂	5 ¹ / ₂	6 ¹ / ₈	14-16d	6-16d	2085	2530	1345
H610 max	HU610 max	6 x 10	2 ¹ / ₂	5 ¹ / ₂	8 ¹ / ₈	18-16d	8-16d	2680	3250	1795
H612 max	HU612 max	6 x 12	2 ¹ / ₂	5 ¹ / ₂	10 ¹ / ₈	22-16d	8-16d	3275	3970	1795
H614 max	HU614 max	6 x 14	2 ¹ / ₂	5 ¹ / ₂	11 ¹ / ₈	24-16d	12-16d	3570	4335	2695
H616 max	HU616 max	6 x 16	2 ¹ / ₂	5 ¹ / ₂	13 ¹ / ₈	26-16d	12-16d	3870	4695	2695
H88 max	HU88 max	8 x 8	2 ¹ / ₂	7 ¹ / ₂	6 ¹ / ₈	14-16d	6-16d	2085	2530	1345
H810 max	HU810 max	8 x 10	2 ¹ / ₂	7 ¹ / ₂	8 ¹ / ₈	18-16d	8-16d	2680	3250	1795
H812 max	HU812 max	8 x 12	2 ¹ / ₂	7 ¹ / ₂	10 ¹ / ₈	22-16d	8-16d	3275	3970	1795
H814 max	HU814 max	8 x 14	2 ¹ / ₂	7 ¹ / ₂	11 ¹ / ₈	24-16d	12-16d	3570	4335	2695
H816 max	HU816 max	8 x 16	2 ¹ / ₂	7 ¹ / ₂	13 ¹ / ₈	26-16d	12-16d	2695	3870	4695
H24-2	HU24-2	(2) 2 x 4	2	3 ¹ / ₈	3 ¹ / ₈	4-16d	2-10d	595	720	380
H26-2 max	HU26-2 max	(2) 2 x 6	2 ¹ / ₂	3 ¹ / ₈	5 ¹ / ₈	12-16d	6-10d	1785	2165	1135
H28-2 max	HU28-2 max	(2) 2 x 8	2 ¹ / ₂	3 ¹ / ₈	6 ¹ / ₄	14-16d	6-10d	2085	2530	1135
H210-2 max	HU210-2 max	(2) 2 x 10	2 ¹ / ₂	3 ¹ / ₈	8 ¹ / ₂	18-16d	10-10d	2680	3250	1895
H212-2 max	HU212-2 max	(2) 2 x 12	2 ¹ / ₂	3 ¹ / ₈	10 ¹ / ₄	22-16d	10-10d	3275	3970	1895
H214-2 max	HU214-2 max	(2) 2 x 14	2 ¹ / ₂	3 ¹ / ₈	12	24-16d	12-10d	3570	4335	2015
H216-2 max	HU216-2 max	(2) 2 x 16	2 ¹ / ₂	3 ¹ / ₈	13 ¹ / ₄	26-16d	12-10d	3870	4695	2015
H26-3 max	HU26-3 max	(3) 2 x 6	2 ¹ / ₂	4 ¹ / ₁₆	5 ¹ / ₈	12-16d	6-10d	1785	2165	1135
H28-3 max	HU28-3 max	(3) 2 x 8	2 ¹ / ₂	4 ¹ / ₁₆	6 ¹ / ₄	14-16d	6-10d	1785	2165	1135
H210-3 max	HU210-3 max	(3) 2 x 10	2 ¹ / ₂	4 ¹ / ₁₆	8 ¹ / ₈	18-16d	10-10d	2680	3250	1895
H212-3 max	HU212-3 max	(3) 2 x 12	2 ¹ / ₂	4 ¹ / ₁₆	10 ¹ / ₈	22-16d	10-10d	3275	3970	1895
H214-3 max	HU214-3 max	(3) 2 x 14	2 ¹ / ₂	4 ¹ / ₁₆	12	24-16d	12-10d	3570	4335	2015
H210-4 max	HU210-4 max	(4) 2 x 10	2 ¹ / ₂	6	8 ¹ / ₈	18-16d	10-10d	2680	3250	1895
H3.25/12 max	HU3.25/12 max	3 ¹ / ₈	2 ¹ / ₂	3 ¹ / ₄	11 ¹ / ₄	24-16d	12-10d	3570	4335	2015
H3.25/16 max	HU3.25/16 max	3 ¹ / ₈	2 ¹ / ₂	3 ¹ / ₄	13 ¹ / ₈	26-16d	12-10d	3870	4695	2015
H5.25/12 max	HU5.25/12 max	5 ¹ / ₈	2 ¹ / ₂	5 ¹ / ₄	10 ¹ / ₈	22-16d	8-16d	3275	3970	1795
H5.25/16 max	HU5.25/16 max	5 ¹ / ₈	2 ¹ / ₂	5 ¹ / ₄	13 ¹ / ₈	26-16d	12-10d	3870	4695	2695



H416



HR610



H210-2

For Product Substitutions . . . the ***ONLY APPROVED EQUAL™***

KC® STOCK NO	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS(160)
		D	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
H7	HU7	2 ¹ / ₂	1 ¹³ / ₁₆	6 ¹ / ₁₆	16-16d	8-10d x 1 ¹ / ₂	2380	2890	1515
H9	HU9	2 ¹ / ₂	1 ¹³ / ₁₆	9 ¹ / ₁₆	24-16d	10-10d x 1 ¹ / ₂	3570	4335	1895
H11	HU11	2 ¹ / ₂	1 ¹³ / ₁₆	11 ¹ / ₁₆	30-16d	10-10d x 1 ¹ / ₂	4465	4810	1895
H14	HU14	2 ¹ / ₂	1 ¹³ / ₁₆	13 ¹¹ / ₁₆	36-16d	14-10d x 1 ¹ / ₂	5055	5420	2015

HTF**HTFR**

HEAVY TOP FLANGE JOIST HANGERS

Design Features . . the addition of a top flange meets specifications for schools and public buildings, where added strength, support, and safety are prime requirements. Two design styles are available for applications and load-bearing flexibility.

Stock No. Design Configuration

HTF () Standard

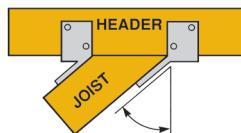
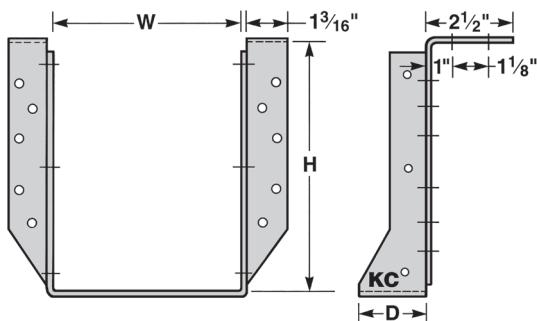
HTF () R Reversed face flange (turned in) for 3xs and larger joist sizes

- **Joist sizes** . . 2xs, 3xs, 4xs, 6xs, 8xs, double 2xs, triple 2xs, 3 $\frac{1}{8}$ " and 5 $\frac{1}{8}$ " glulam . . also available on special order for rough beam and larger glulam sizes. When ordering, specify the **W**, **D** and **H** dimensions.

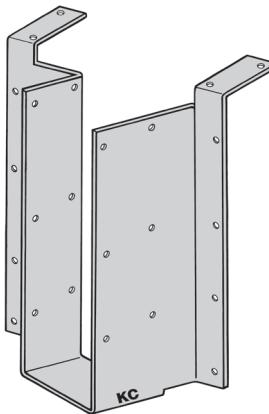
Material . . 12 ga. galvanized steel.

Loads . . two-plane nailing schedule offers extra support and load strength where mechanical vibration is a factor.

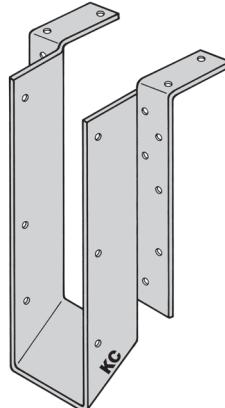
Skewed and Sloped Hangers . . (see page 43) available, specify angle (67 $\frac{1}{2}$ ° max.) and whether left or right, up or down. Not available in **HTF()R** reversed flange styles. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.



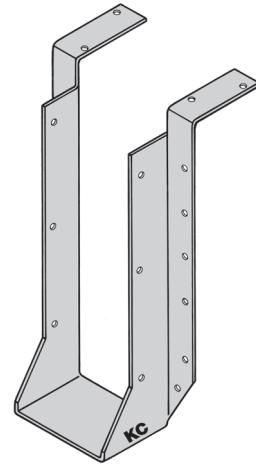
Top View – Skewed Left



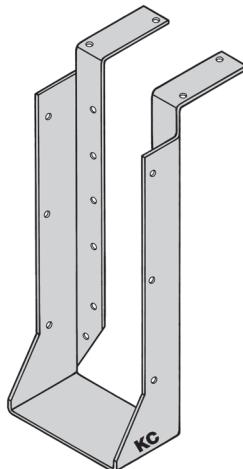
Skewed Left



Sloped Down



HTF412



**HTFR412
(Reversed)**

PANELIZED ROOF HANGERS

PH**PHG****PHLTF****PHGLTF**

PANEL HANGERS/PANEL HANGERS GRIP LOCK

Design Features . . are specifically engineered for the panelized roof construction industry where it is standard procedure to nail through the (plywood) sheathing and through the **PHG** hanger top flange, using one 10d x 2 $\frac{1}{8}$ " nail placed in the middle third of the top flange, no closer than $\frac{1}{4}$ " from the back edge of the hanger. The seat nail is non-structural and does not contribute to the load value.

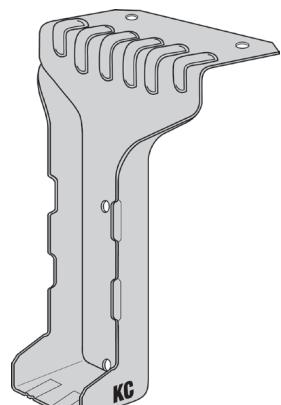
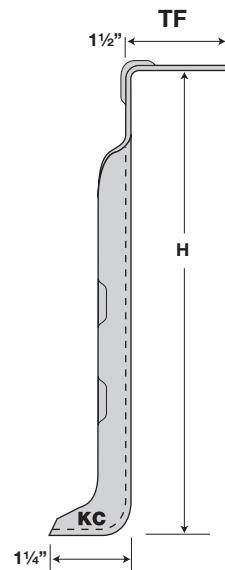
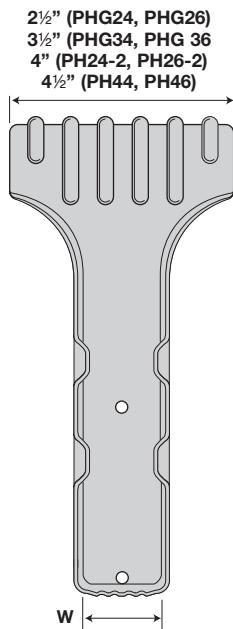
PHG – vertical grooves grip the stiffener without nails for faster, more economical prefabricated panels. Grip-lock panel hanger will not fall off during transportation or installation.

- **Joist sizes** . . 2xs, double 2xs, 3xs and 4xs.

Material . . 18 ga. galvanized steel.

Loads . . based on independent laboratory test results conforming to codes.

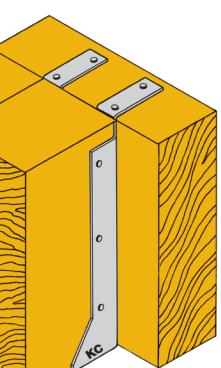
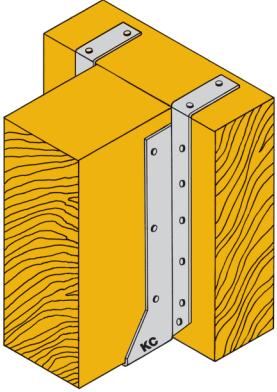
Long Top Flange Hangers . . available only in 2x4 and 2x6 style to order and identified as **PHG-LTF** (example **PHG26** with long top flange, specify as **PHG26LTF**).



PHG26LTF

HTF
HTFR

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS
			D	W	H	TF	FACE	JOIST	NORMAL LBS	MAX LBS	
HTF24	HU24TF	2 x 4	2	1 1/16	3 1/2	4-16d	2-16d	2-10d x 1 1/2	2090	2100	260
HTF26	HU26TF	2 x 6	2	1 1/16	5 5/8	4-16d	6-16d	4-10d x 1 1/2	2310	2420	580
HTF28	HU28TF	2 x 8	2	1 1/16	7 1/4	4-16d	6-16d	4-10d x 1 1/2	2335	2420	580
HTF210	HU210TF	2 x 10	2	1 1/16	9 1/4	4-16d	8-16d	4-10d x 1 1/2	2335	2420	580
HTF212	HU212TF	2 x 12	2	1 1/16	11 1/8	4-16d	10-16d	6-10d x 1 1/2	2530	2690	870
HTF214	HU214TF	2 x 14	2	1 1/16	13 1/8	4-16d	12-16d	6-10d x 1 1/2	3000	3160	870
HTF216	HU216TF	2 x 16	2	1 1/16	15 1/8	4-16d	14-16d	8-10d x 1 1/2	3215	3435	1310
HTF34	HU34TF	3 x 4	2	2 9/16	3 1/2	4-16d	4-16d	2-10d x 1 1/2	3000	3285	515
HTF36	HU36TF	3 x 6	2	2 9/16	5 5/8	4-16d	6-16d	4-10d x 1 1/2	3295	3900	555
HTF38	HU38TF	3 x 8	2	2 9/16	7 1/4	4-16d	8-16d	4-10d x 1 1/2	3900	4000	775
HTF310	HU310TF	3 x 10	2	2 9/16	9 1/4	4-16d	10-16d	6-10d x 1 1/2	4170	4360	775
HTF312	HU312TF	3 x 12	2	2 9/16	11 1/8	4-16d	12-16d	6-10d x 1 1/2	4335	4715	1035
HTF314	HU314TF	3 x 14	2	2 9/16	13 1/8	4-16d	14-16d	8-10d x 1 1/2	4715	5430	1310
HTF316	HU316TF	3 x 16	2	2 9/16	15 1/8	4-16d	16-16d	8-10d x 1 1/2	4715	5430	1310
HTF44	HU44TF	4 x 4	2	3 3/16	3 1/2	4-16d	4-16d	2-10d	3000	3285	330
HTF46	HU46TF	4 x 6	2	3 3/16	5 5/8	4-16d	6-16d	4-10d	3285	3645	655
HTF48	HU48TF	4 x 8	2	3 3/16	7 1/4	4-16d	8-16d	4-10d	3570	4000	655
HTF410	HU410TF	4 x 10	2	3 3/16	9 1/4	4-16d	10-16d	6-10d	4150	4360	985
HTF412	HU412TF	4 x 12	2	3 3/16	11 1/8	4-16d	12-16d	6-10d	4550	5105	985
HTF414	HU414TF	4 x 14	2	3 3/16	13 1/8	4-16d	14-16d	8-10d	4830	5075	1310
HTF416	HU416TF	4 x 16	2	3 3/16	15 1/8	4-16d	16-16d	8-10d	5050	5430	1310
HTF66	HU66TF	6 x 6	2	5 1/2	5 5/8	4-16d	6-16d	4-10d	3410	3530	760
HTF68	HU68TF	6 x 8	2	5 1/2	7 1/4	4-16d	8-16d	4-10d	3570	3830	760
HTF610	HU610TF	6 x 10	2	5 1/2	9 1/4	4-16d	10-16d	6-10d	4150	4160	1145
HTF612	HU612TF	6 x 12	2	5 1/2	11 1/8	4-16d	12-16d	6-10d	4550	5105	1145
HTF614	HU614TF	6 x 14	2	5 1/2	13 1/8	4-16d	14-16d	8-10d	4830	5450	1525
HTF616	HU616TF	6 x 16	2	5 1/2	15 1/8	4-16d	16-16d	8-10d	5105	5795	1525
HTF88	—	8 x 8	2	7 1/2	7 1/4	4-16d	8-16d	4-10d	3570	3830	760
HTF810	—	8 x 10	2	7 1/2	9 1/4	4-16d	10-16d	6-10d	4150	4160	1145
HTF812	—	8 x 12	2 1/2	7 1/2	11 1/8	4-16d	12-16d	6-10d	4550	5105	1145
HTF814	—	8 x 14	2 1/2	7 1/2	13 1/8	4-16d	14-16d	8-10d	4830	5405	1525
HTF816	—	8 x 16	2 1/2	7 1/2	15 1/8	4-16d	16-16d	8-10d	5105	5795	1525
HTF24-2	HU24-2TF	(2) 2 x 4	2	3 1/8	3 1/2	4-16d	4-16d	2-10d	3000	3285	330
HTF26-2	HU26-2TF	(2) 2 x 6	2	3 1/8	5 5/8	4-16d	6-16d	4-10d	3725	3400	655
HTF28-2	HU28-2TF	(2) 2 x 8	2	3 1/8	7 1/4	4-16d	8-16d	4-10d	3900	4000	655
HTF210-2	HU210-2TF	(2) 2 x 10	2	3 1/8	9 1/4	4-16d	10-16d	6-10d	4170	4360	985
HTF212-2	HU212-2TF	(2) 2 x 12	2	3 1/8	11 1/8	4-16d	12-16d	6-10d	4325	4880	985
HTF214-2	HU214-2TF	(2) 2 x 14	2 1/2	3 1/8	13 1/8	4-16d	14-16d	8-10d	4335	5075	1310
HTF216-2	HU216-2TF	(2) 2 x 16	2 1/2	3 1/8	15 1/8	4-16d	16-16d	8-10d	4715	5430	1310
HTF210-3	HU210-3TF	(3) 2 x 10	2	4 1/16	9 1/4	4-16d	10-16d	6-10d	4150	4160	1145
HTF212-3	HU212-3TF	(3) 2 x 12	2 1/2	4 1/16	11 1/8	4-16d	12-16d	6-10d	4550	5105	1145
HTF214-3	HU214-3TF	(3) 2 x 14	2 1/2	4 1/16	13 1/8	4-16d	14-16d	8-10d	4835	5050	1525
HTF216-3	HU216-3TF	(3) 2 x 16	2 1/2	4 1/16	15 1/8	4-16d	16-16d	8-10d	5050	5145	1525
HTF3.25/12	HU3.25/12TF	3 1/8	2 1/2	3 1/4	12	4-16d	12-16d	6-10d	4325	4880	1145
HTF3.25/16.5	HU3.25/16.5TF	3 1/8	2 1/2	3 1/4	16 1/2	4-16d	16-16d	8-10d	5050	5430	1525
HTF5.25/12	HU5.25/12TF	5 1/8	2 1/2	5 1/4	12	4-16d	12-16d	6-16d	4550	5105	1145
HTF5.25/16.5	HU5.25/16.5TF	5 1/8	2 1/2	5 1/4	16 1/2	4-16d	16-16d	8-16d	5105	5795	1525

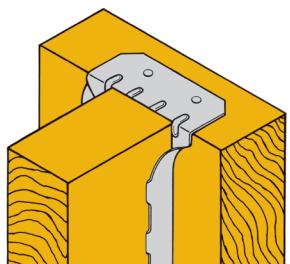


PANELIZED ROOF HANGERS

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD		MAX LBS
			W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
PH24LTF	—	2 x 4	1 1/16	3 1/2	1 1/2	2-10d	1-10d	685	685	
PH24-2	F24-2	(2) 2 x 4	3 1/8	3 1/2	1 1/16	2-10d	2-10d	820	820	
PH26LTF	—	2 x 6	1 1/16	5 5/8	1 1/2	2-10d	1-10d	685	685	
PH26-2	F26-2	(2) 2 x 6	3 1/8	5 5/8	1 1/16	2-10d	2-10d	820	820	
PH34	F34	3 x 4	2 9/16	3 1/2	1 1/16	2-10d	1-10d	820	820	
PH36	F36	3 x 6	2 9/16	5 5/8	1 1/16	2-10d	1-10d	820	820	
PH44	F44	4 x 4	3 3/16	3 1/2	1 1/16	2-10d	1-10d	1000	1000	
PH46	F46	4 x 6	3 3/16	5 5/8	1 1/16	2-10d	1-10d	1000	1000	
PHG24	F24N	2 x 4	1 1/16	3 1/2	1 1/16	2-10d	Grip	605	605	
PHG24LTF	HF24N	2 x 4	1 1/16	3 1/2	1 1/2	2-10d	Grip	685	685	
PHG26	F26N	2 x 6	1 1/16	5 5/8	1 1/16	2-10d	Grip	605	605	
PHG26LTF	HF26N	2 x 6	1 1/16	5 5/8	1 1/2	2-10d	Grip	685	685	
PHG34	F34N	3 x 4	2 9/16	3 1/2	1 1/16	2-10d	Grip	820	820	
PHG36	F36N	3 x 6	2 9/16	5 5/8	1 1/16	2-10d	Grip	820	820	
PHG44	—	4 x 4	3 3/16	3 1/2	1 1/16	2-10d	Grip	1000	1000	
PHG46	—	4 x 6	3 3/16	5 5/8	1 1/16	2-10d	Grip	1000	1000	

PH
PHG
PHLTF
PHGLTF



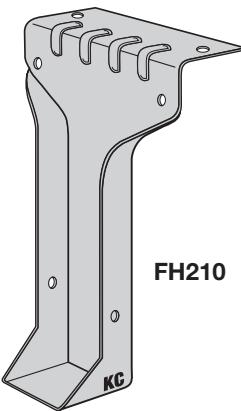
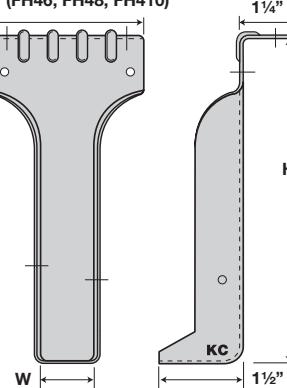
FH**FORMED HANGERS**

Design Features . . both the FH top flange hangers are designed for labor-saving, fast joist seating. The key to this 25%-50% faster installation is the dimension and angle accuracy, the result of KC® Metals' positive control dies and 1-piece design. The resultant flat seat assures a perfect ceiling, and the $\frac{1}{8}$ " single thickness expands hanger use to floor construction with increased load-carrying capacities.

- **Joist sizes** . . 2 x 6 to 2 x 10
3 x 6 to 3 x 10
4 x 6 to 4 x 10

Material . . FH - 18 ga. galvanized steel.

3½" (FH26, FH28, FH210)
4½" (FH36, FH38, FH310)
5½" (FH46, FH48, FH410)

**FH210****JOIST AND PURLIN HANGERS****RS ROOF STRUCTURE JOIST AND PURLIN HANGERS**

Design Features . . the RS series provide the architect and builder with a wide variety of product sizes and load capacities in 14 ga., 12 ga. galvanized or $\frac{3}{16}$ " prime quality steel. The series is designed primarily for use in panelized roof construction.

One-piece design from positive control dies also incorporates easy access, full side flanges for added support . . increased bearing areas (D and TF) for greater load capacity. There are no elongated holes.

Material . . 14 ga. and 12 ga. heavy-coated galvanized steel or $\frac{3}{16}$ " prime quality steel. Weldable, non-toxic hot roll sheet is available for steel fabricators.

RS2x - 14 ga. galvanized steel.

RS3x, 4x, 6x - 12 ga. galvanized steel.

RSO4x - 12 ga. galvanized steel.

RSH, RSG, RSGH - $\frac{3}{16}$ " prime quality steel.

Nails . . RSH, RSG and RSGH N25, furnished.

Finish . . RSH, RSG and RSGH KC® SUPERSPEED® gray paint.

Design Dimensions . . H is sized to account for normal joist shrinkage. Specify if special H dimensions are required. W dimensions listed are for dressed timber widths as noted. W dimensions for RSH, RSG and RSGH in glulam sizes will be slightly oversize to facilitate erection. Laminated and other special hangers are made to order. The standard H dimensions found in the adjoining tables have an allowance to compensate for common shrinkage conditions. Specify if W dimensions are required.

Loads . . average ultimate load values are calculated from independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three.

Uplift Values . . are the result of extensive testing programs conducted in conformity with criteria set forth by the ICC. (HNP) Hayward Nail Pattern is also available for additional uplift. To order Uplift sizes add "U" to stock No. (example **RSU616**).

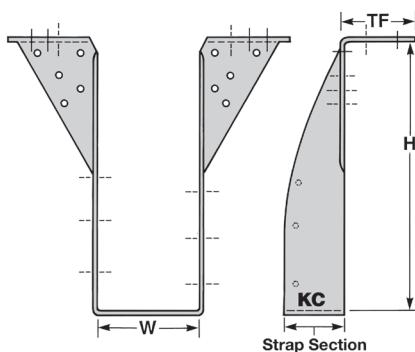
Welding . . on saddle hangers (illus.) is done by KC® SUPERSPEED® certified welders.

Saddle Hangers . . are available and made to the engineer's specifications. They may be used for most conditions except at end wall and are especially recommended for nailer (sleeper) applications. Specify S dimensions as well as W and H dimensions.

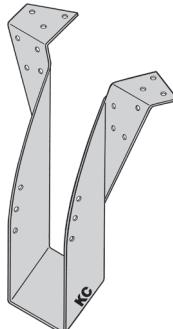
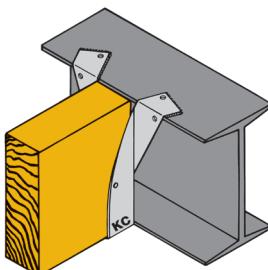
Skewed Hangers . . (see page 43)

Sloped Hangers . . available, specify angle and whether sloped up or down. Due to the infinite variety of custom orders, sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering design.

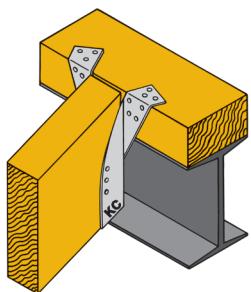
This series may be used for weld-on applications. The minimum required weld to the top flanges is $\frac{1}{8}$ " x 2" fillet weld to each side of each top flange tab. Distribute the weld equally on both top flanges. Weld-on applications produce the maximum design loads listed. Uplift loads do not apply to this application.



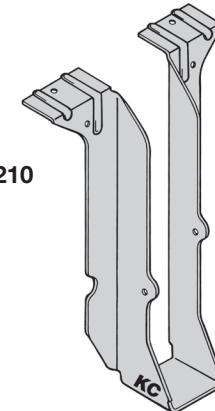
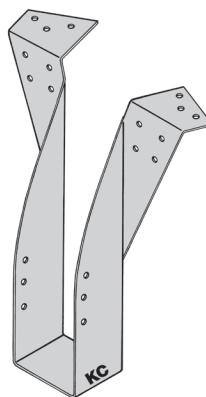
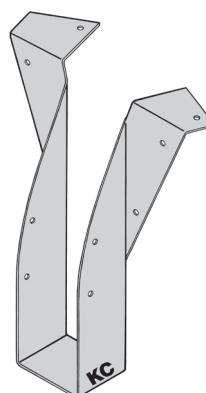
Strap Section

**Sloped Down**

Weld-On Application
Optional Installation
with Code-Approved
Power Actuated
Systems

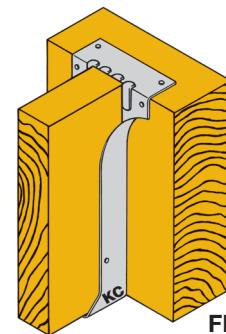


Nailer
(Sleeper)
Application

**RS210****RS414****RSH414**

For Product Substitutions . . . the ONLY APPROVED EQUAL™

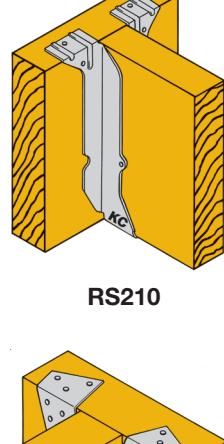
KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
FH26	—	2 x 6	1 $\frac{1}{16}$	5 $\frac{3}{8}$	4-16d	2-10d x 1 $\frac{1}{2}$	1210	1260	150
FH28	—	2 x 8	1 $\frac{1}{16}$	7 $\frac{1}{4}$	4-16d	2-10d x 1 $\frac{1}{2}$	1210	1260	150
FH210	—	2 x 10	1 $\frac{1}{16}$	9 $\frac{1}{4}$	4-16d	2-10d x 1 $\frac{1}{2}$	1210	1260	150
FH36	—	3 x 6	2 $\frac{3}{16}$	5 $\frac{3}{8}$	4-16d	2-10d	1210	1260	295
FH38	—	3 x 8	2 $\frac{3}{16}$	7 $\frac{1}{4}$	4-16d	2-10d	1210	1260	295
FH310	—	3 x 10	2 $\frac{3}{16}$	9 $\frac{1}{4}$	4-16d	2-10d	1210	1260	295
FH46	—	4 x 6	3 $\frac{3}{16}$	5 $\frac{3}{8}$	4-16d	2-10d	1210	1260	295
FH48	—	4 x 8	3 $\frac{3}{16}$	7 $\frac{1}{4}$	4-16d	2-10d	1210	1260	295
FH410	—	4 x 10	3 $\frac{3}{16}$	9 $\frac{1}{4}$	4-16d	2-10d	1210	1260	295



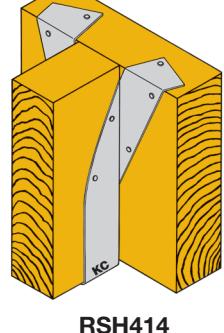
FH210

JOIST AND PURLIN HANGERSFor Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	JOIST	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS	
			D	W	TF	H	TF	FACE	JOIST	NORMAL LBS	MAX LBS	
RS26	LB26	2 x 6	1 $\frac{1}{2}$	1 $\frac{1}{16}$	1 $\frac{1}{8}$	5 $\frac{3}{8}$	2-16d	2-16d	2-10d x 1 $\frac{1}{2}$	1575	1575	195
RS28	LB28	2 x 8	1 $\frac{1}{2}$	1 $\frac{1}{16}$	1 $\frac{1}{8}$	7 $\frac{1}{4}$	2-16d	2-16d	2-10d x 1 $\frac{1}{2}$	1575	1575	195
RS210	LB210	2 x 10	2	1 $\frac{1}{16}$	1 $\frac{1}{8}$	9 $\frac{1}{4}$	2-16d	2-16d	2-10d x 1 $\frac{1}{2}$	1835	1960	195
RS212	LB212	2 x 12	2	1 $\frac{1}{16}$	1 $\frac{1}{8}$	11 $\frac{1}{8}$	2-16d	2-16d	2-10d x 1 $\frac{1}{2}$	1835	1960	195
RS214	LB214	2 x 14	2	1 $\frac{1}{16}$	1 $\frac{1}{2}$	13 $\frac{1}{8}$	2-16d	2-16d	2-10d x 1 $\frac{1}{2}$	1835	1960	195
RS216	LB216	2 x 16	2	1 $\frac{1}{16}$	1 $\frac{1}{2}$	15 $\frac{1}{8}$	2-16d	2-16d	2-10d x 1 $\frac{1}{2}$	1835	1960	195
RS38	B38	3 x 8	2 $\frac{1}{2}$	2 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d x 2 $\frac{1}{2}$	3800	3800	1010
RS310	B310	3 x 10	2 $\frac{1}{2}$	2 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d x 2 $\frac{1}{2}$	3800	3800	1010
RS312	B312	3 x 12	2 $\frac{1}{2}$	2 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d x 2 $\frac{1}{2}$	3800	3800	1010
RS314	B314	3 x 14	2 $\frac{1}{2}$	2 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d x 2 $\frac{1}{2}$	3800	3800	1010
RS316	B316	3 x 16	2 $\frac{1}{2}$	2 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d x 2 $\frac{1}{2}$	3800	3800	1010
RS48	B48	4 x 8	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d	3800	3800	1010
RS410	B410	4 x 10	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d	3800	3800	1010
RS412	B412	4 x 12	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d	3800	3800	1010
RS414	B414	4 x 14	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d	3800	3800	1010
RS416	B416	4 x 16	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	2 $\frac{1}{2}$	6-16d	8-16d	6-16d	3800	3800	1010
RS412HNP	—	4 x 12	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	11 $\frac{1}{8}$	2-16d	4-16d	6-16d	4210	4210	1010
RS414HNP	—	4 x 14	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	13 $\frac{1}{8}$	2-16d	4-16d	6-16d	4210	4210	1010
RS416HNP	—	4 x 16	2 $\frac{1}{2}$	3 $\frac{3}{16}$	2 $\frac{1}{2}$	15 $\frac{1}{8}$	2-16d	4-16d	6-16d	4210	4210	1010
RS0412	HB412	4 x 12	3	3 $\frac{3}{16}$	2 $\frac{1}{2}$	11 $\frac{1}{8}$	2-16d	4-16d	6-16d	4300	4300	1010
RS0414	HB414	4 x 14	3	3 $\frac{3}{16}$	2 $\frac{1}{2}$	13 $\frac{1}{8}$	2-16d	4-16d	6-16d	4335	4335	1010
RS0416	HB416	4 x 16	3	3 $\frac{3}{16}$	2 $\frac{1}{2}$	15 $\frac{1}{8}$	2-16d	4-16d	6-16d	4335	4335	1010
RS68	B68	6 x 8	2 $\frac{1}{2}$	5 $\frac{1}{2}$	2 $\frac{1}{2}$	7 $\frac{1}{4}$	4-16d	6-16d	6-16d	4200	4200	1010
RS610	B610	6 x 10	2 $\frac{1}{2}$	5 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{4}$	4-16d	6-16d	6-16d	4200	4200	1010
RS612	B612	6 x 12	2 $\frac{1}{2}$	5 $\frac{1}{2}$	2 $\frac{1}{2}$	11 $\frac{1}{8}$	4-16d	6-16d	6-16d	4200	4200	1010
RS614	B614	6 x 14	2 $\frac{1}{2}$	5 $\frac{1}{2}$	2 $\frac{1}{2}$	13 $\frac{1}{8}$	4-16d	6-16d	6-16d	4200	4200	1010
RS616	B616	6 x 16	2 $\frac{1}{2}$	5 $\frac{1}{2}$	2 $\frac{1}{2}$	15 $\frac{1}{8}$	4-16d	6-16d	6-16d	4200	4200	1010
RSH412	HHB412	4 x 12	3	3 $\frac{3}{16}$	2 $\frac{1}{2}$	11 $\frac{1}{8}$	2-N25	2-N25	2-N25	4300	4300	530
RSH414	HHB414	4 x 14	3	3 $\frac{3}{16}$	2 $\frac{1}{2}$	13 $\frac{1}{8}$	2-N25	4-N25	4-N25	5135	5135	1055
RSH416	HHB416	4 x 16	3	3 $\frac{3}{16}$	2 $\frac{1}{2}$	15 $\frac{1}{8}$	2-N25	4-N25	4-N25	5135	5135	1055
RSH68	HHB68	6 x 8	2	5 $\frac{1}{2}$	2 $\frac{1}{2}$	7 $\frac{1}{4}$	2-N25	2-N25	2-N25	4300	4300	530
RSH610	HHB610	6 x 10	2	5 $\frac{1}{2}$	2 $\frac{1}{2}$	9 $\frac{1}{4}$	2-N25	2-N25	2-N25	4300	4300	530
RSH612	HHB612	6 x 12	3	5 $\frac{1}{2}$	2 $\frac{1}{2}$	11 $\frac{1}{8}$	4-N25	6-N25	6-N25	6235	6235	1585
RSH614	HHB614	6 x 14	3	5 $\frac{1}{2}$	2 $\frac{1}{2}$	13 $\frac{1}{8}$	4-N25	6-N25	6-N25	6235	6235	1585
RSH616	HHB616	6 x 16	3	5 $\frac{1}{2}$	2 $\frac{1}{2}$	15 $\frac{1}{8}$	4-N25	6-N25	6-N25	6235	6235	1585
RSH812	HHB812	8 x 12	3	7 $\frac{1}{2}$	2 $\frac{1}{2}$	11 $\frac{1}{8}$	4-N25	6-N25	6-N25	6235	6235	1585
RSH814	HHB814	8 x 14	3	7 $\frac{1}{2}$	2 $\frac{1}{2}$	13 $\frac{1}{8}$	4-N25	6-N25	6-N25	6235	6235	1585
RSH816	HHB816	8 x 16	3	7 $\frac{1}{2}$	2 $\frac{1}{2}$	15 $\frac{1}{8}$	4-N25	6-N25	6-N25	6235	6235	1585
RSH3	HHB3	3 $\frac{1}{2}$ x Specify	3	3 $\frac{1}{4}$	2 $\frac{1}{2}$	Specify	4-N25	6-N25	6-N25	6105	6235	1585
RSH5	HHB5	5 $\frac{1}{2}$ x Specify	3	5 $\frac{1}{4}$	2 $\frac{1}{2}$	Specify	4-N25	6-N25	6-N25	6105	6235	1585
RSH7	HHB7	6 $\frac{3}{4}$ x Specify	3	6 $\frac{7}{8}$	2 $\frac{1}{2}$	Specify	4-N25	6-N25	6-N25	6105	6235	1585
RSG3	GB3	3 $\frac{1}{2}$ x Specify	3 $\frac{1}{2}$	3 $\frac{1}{4}$	2 $\frac{1}{2}$	Specify	4-N25	10-N25	6-N25	7215	7490	1585
RSG5	GB5	5 $\frac{1}{2}$ x Specify	3 $\frac{1}{2}$	5 $\frac{1}{4}$	2 $\frac{1}{2}$	Specify	4-N25	10-N25	6-N25	7370	8005	1585
RSG7	GB7	6 $\frac{3}{4}$ x Specify	3 $\frac{1}{2}$	6 $\frac{7}{8}$	2 $\frac{1}{2}$	Specify	4-N25	10-N25	6-N25	7370	8005	1585
RSGH5	HGB5	5 $\frac{1}{2}$ x Specify	4	5 $\frac{1}{4}$	2 $\frac{1}{2}$	Specify	4-N25	12-N25	6-N25	7885	8520	1585
RSGH7	HGB7	6 $\frac{3}{4}$ x Specify	4	6 $\frac{7}{8}$	2 $\frac{1}{2}$	Specify	4-N25	12-N25	6-N25	7885	8520	1585



RS414



RSH414

R ROOF JOIST/PURLIN HANGERS

RA Design Features . . of the R series offer a wide application flexibility, particularly to the panelized construction industry, including seven different versions:

- (1) Standard versions
- (2) Skewed versions
- (3) Offset versions
- (4) Saddle versions
- (5) Seat sloped versions

(6) Top flange angled down versions

(7) Top flange open/closed versions

Additional design features provide easier, faster installation and greater load capacities and strength:

- Superior flange design
- Higher load values
- Stirrup design fully maximizes metal surface area where it is vital to construction needs.

R - 2xs, 3xs and 4xs.

RA - 3xs, 4xs, 6xs and double 2xs.

RH - 4xs, 6xs and 8xs.

RHG - glulam sizes.

Material . . 12 ga., $\frac{3}{16}$ " and $\frac{1}{4}$ " prime quality steel.

R and **RA** series - 12 ga. and $\frac{3}{16}$ " steel.

RH series - 12 ga., $\frac{3}{16}$ " and $\frac{1}{4}$ " steel.

Loads . . maximum ultimate load values are calculated from independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three. All nail holes must be filled with correct nails to achieve **design loads!**

Uplift Values . . are the result of extensive testing programs conducted in conformity with criteria set forth by the ICC. (HNP) Hayward Nail Pattern is also available for additional uplift. To order Uplift sizes add "U" to stock No. (example **RHU616**).

Finish . . KC® **SUPERSPEED**® gray paint.

Design Dimensions . . **H** is sized to account for normal joist shrinkage. Specify if special **H** dimensions are required. **W** dimensions listed are for dressed timber widths as noted. Specify if special **W** dimensions are required.

Ordering/Specifying Information:

Skewed . . add **SK** to stock no., direction and angle of skew. (Example: **R210X SKL 30°**, **R** = Right, **L** = Left)

Offset . . add **OS** to stock no. and direction of offset, left or right. (Example: **R210X OSL**, **R** = Right, **L** = Left)

Saddle . . add **S** to stock no. and width of supporting beams. (Example: **R210X S = 5½"**)

Sloped Seat . . add **SL** to stock no. and angle of slope (up or down). (Example: **R210XSLU15°**, **D** = Down, **U** = Up)

Top Flange Angled Down . . add **TFD** to stock no., direction and angle. (Example: **R210X TFDL15°**, **R** = Right, **L** = Left)

Top Flange Open . . add **TFO** to stock no. and angle. (Example: **R210X TFO20°**, **C** = Closed, **O** = Open)

Any of the above are available in a combination hanger. (Example: Offset right, skewed 45° left, sloped down 15°). (**R210X OSR/SKL45°/SLD15°**).

Skewed and Sloped Hangers . . available, specify angle (50° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

Hangers may be welded to steel headers with $\frac{1}{8}$ " for **R**, $\frac{3}{16}$ " for **RA**, and $\frac{1}{4}$ " for **RH** by $\frac{1}{8}$ " fillet welds located at each end of the top flange. Weld-on applications produce maximum design load listed. Uplift loads do not apply to this application.

TR TOP MOUNT HANGERS

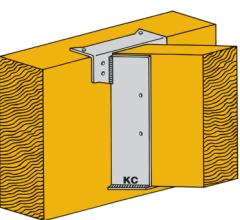
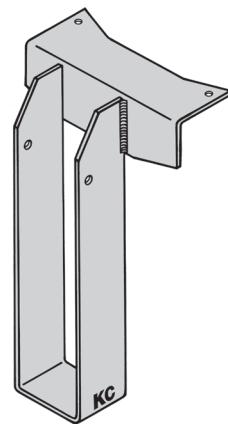
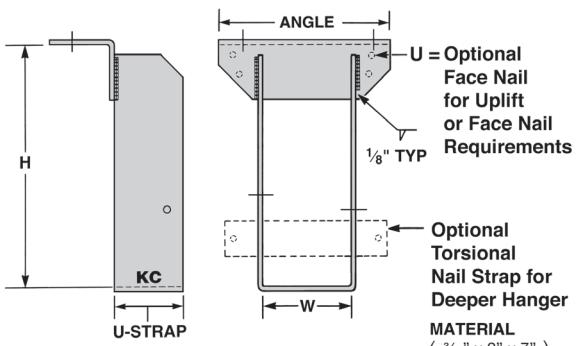
Design Features . . provide economical production framing with potential additional savings when hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flanges for accurate header connections. Top flange design provides automatic self-jigging.

- **Joist sizes** . . 2 x 4 through 2 x 16.

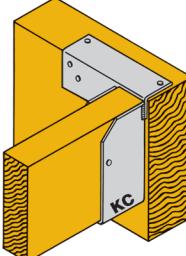
Material . . 18 ga. galvanized steel.

Prongs . . no joist nailing . . provide faster, easier installation.

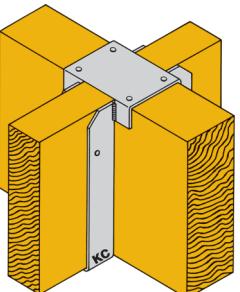
Special . . for pole barn construction, use the **TR24N** or the **TR26N** with nailing into the joist, as needed.



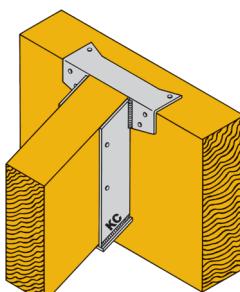
Skewed Right
(Welded)



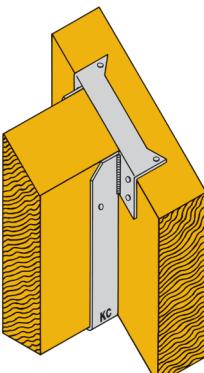
Top Flange Offset
Pictured Left



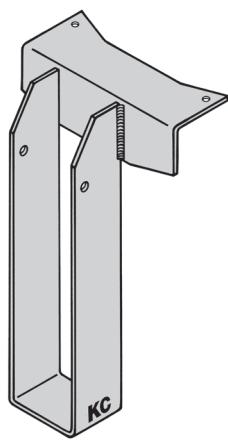
Saddle Version



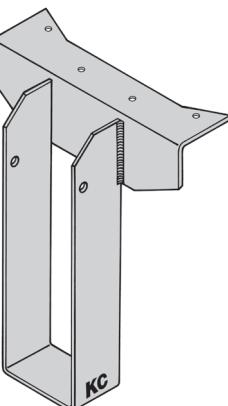
Sloped Down
(Welded)



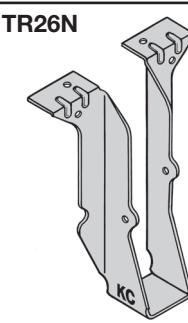
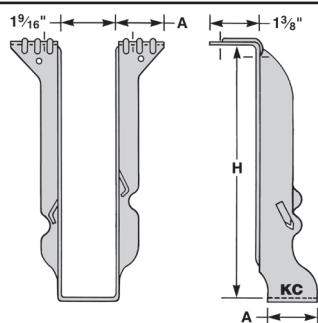
Angled Down Right
H = High Side



RA414

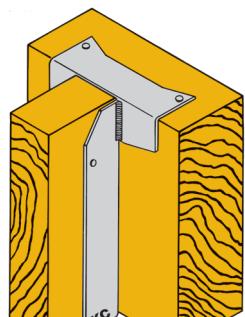


RH414

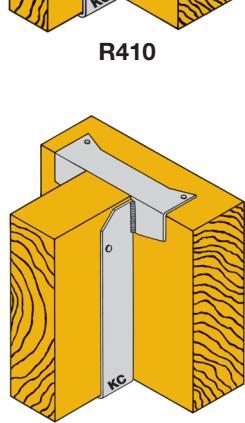


R
RA
RH
RHF
RHG
RGHF

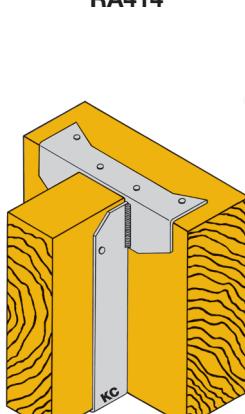
KC® STK NO	REF NO	JOIST SIZE	MATERIAL (INCHES)		DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD	
			ANGLE	"U" STRAP	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS
R26	W26	2 x 6	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	1 1/16	5 1/8	2-10d	2-10d x 1 1/2	2365	2365
R28	W28	2 x 8	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	1 1/16	7 1/4	2-10d	2-10d x 1 1/2	2365	2365
R210	W210	2 x 10	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	1 1/16	9 1/4	2-10d	2-10d x 1 1/2	2365	2365
R212	W212	2 x 12	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	1 1/16	11 1/8	2-10d	2-10d x 1 1/2	2365	2365
R214	W214	2 x 14	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	1 1/16	13 1/8	2-10d	2-10d x 1 1/2	2365	2365
R216	W216	2 x 16	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	1 1/16	15 1/8	2-10d	2-10d x 1 1/2	2365	2365
R38	W38	3 x 8	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	2 1/16	7 1/4	2-10d	2-10d x 1 1/2	2365	2365
R310	W310	3 x 10	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	2 1/16	9 1/4	2-10d	2-10d x 1 1/2	2365	2365
RA312	WNP312	3 x 12	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	2 1/16	11 1/8	2-10d	2-10d x 1 1/2	3175	3175
RA314	WNP314	3 x 14	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	2 1/16	13 1/8	2-10d	2-10d x 1 1/2	3175	3175
RA316	WNP316	3 x 16	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	2 1/16	15 1/8	2-10d	2-10d x 1 1/2	3175	3175
RA26-2	WNP26-2	(2) 2 x 6	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/8	5 1/8	2-10d	2-10d	3175	3175
RA28-2	WNP28-2	(2) 2 x 8	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/8	7 1/4	2-10d	2-10d	3175	3175
RA210-2	WNP210-2	(2) 2 x 10	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/8	9 1/4	2-10d	2-10d	3175	3175
RA212-2	WNP212-2	(2) 2 x 12	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/8	11 1/8	2-10d	2-10d	3175	3175
RA214-2	WNP214-2	(2) 2 x 14	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/8	13 1/8	2-10d	2-10d	3175	3175
RA216-2	WNP216-2	(2) 2 x 16	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/8	15 1/8	2-10d	2-10d	3175	3175
R46	W46	4 x 6	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	3 1/16	5 1/8	2-10d	2-10d	2365	2365
R48	W48	4 x 8	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	3 1/16	7 1/4	2-10d	2-10d	2365	2365
R410	W410	4 x 10	2 1/4 x 2 1/4 x 12 ga x 6 1/2	2 1/2 x 12 ga	3 1/16	9 1/4	2-10d	2-10d	2365	2365
RA412	WNP412	4 x 12	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/16	11 1/8	2-10d	2-10d	3175	3175
RA414	WNP414	4 x 14	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/16	13 1/8	2-10d	2-10d	3175	3175
RA416	WNP416	4 x 16	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/16	15 1/8	2-10d	2-10d	3175	3175
RA412HNP	-	4 x 12	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/16	11 1/8	6-10d	4-10d	4085	4085
RA414HNP	-	4 x 14	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/16	13 1/8	6-10d	4-10d	4085	4085
RA416HNP	-	4 x 16	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	3 1/16	15 1/8	6-10d	4-10d	4085	4085
RH46	HW46	4 x 6	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	3 1/16	5 1/8	4-10d	2-10d	4120	4120
RH48	HW48	4 x 8	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	3 1/16	7 1/4	4-10d	2-10d	4120	4120
RH410	HW410	4 x 10	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/16	9 1/4	4-10d	2-10d	5320	5320
RH412	HW412	4 x 12	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/16	11 1/8	4-10d	2-10d	5320	5320
RH414	HW414	4 x 14	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/16	13 1/8	4-10d	2-10d	5320	5320
RH416	HW416	4 x 16	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/16	15 1/8	4-10d	2-10d	5320	5320
RHF412	-	4 x 12	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/16	11 1/8	6-10d	2-10d	5335	5335
RHF414	-	4 x 14	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/16	13 1/8	6-10d	2-10d	5335	5335
RHF416	-	4 x 16	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/16	15 1/8	6-10d	2-10d	5335	5335
RA66	WNP66	6 x 6	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	5 1/2	5 1/8	2-10d	2-10d	3270	3270
RA68	WNP68	6 x 8	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	5 1/2	7 1/4	2-10d	2-10d	3270	3270
RA610	WNP610	6 x 10	2 1/4 x 2 1/4 x 7 ga x 7	2 1/2 x 12 ga	5 1/2	9 1/4	2-10d	2-10d	3270	3270
RH66	HW66	6 x 6	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	5 1/2	5 1/8	4-10d	2-10d	5320	5320
RH68	HW68	6 x 8	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	5 1/2	7 1/4	4-10d	2-10d	5320	5320
RH610	HW610	6 x 10	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	5 1/2	9 1/4	4-10d	2-10d	5320	5320
RH612	HW612	6 x 12	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	5 1/2	11 1/8	4-10d	2-10d	5320	5320
RH614	HW614	6 x 14	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	5 1/2	13 1/8	4-10d	2-10d	5320	5320
RH616	HW616	6 x 16	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12 ga	5 1/2	15 1/8	4-10d	2-10d	5320	5320
RH86	HW86	8 x 6	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 7 ga	7 1/2	5 1/8	4-10d	2-10d	5320	5320
RH88	HW88	8 x 8	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 7 ga	7 1/2	7 1/4	4-10d	2-10d	5320	5320
RH810	HW810	8 x 10	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 7 ga	7 1/2	9 1/4	4-10d	2-10d	5320	5320
RH812	HW812	8 x 12	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 7 ga	7 1/2	11 1/8	4-10d	2-10d	5320	5320
RH814	HW814	8 x 14	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 7 ga	7 1/2	13 1/8	4-10d	2-10d	5320	5320
RH816	HW816	8 x 16	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 7 ga	7 1/2	15 1/8	4-10d	2-10d	5320	5320
RHF2.5	-	2 1/2 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	2 1/16	Specify	6-16d	2-10d	4900	4900
RHF3.125	-	3 1/2 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	3 1/4	Specify	6-16d	2-10d	5750	5750
RHF5.125	-	5 1/8 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 x 12 ga	5 1/4	Specify	6-16d	2-10d	5750	5750
RHG2.5	HW2.5	2 1/2 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 3/4 x 12ga	2 1/16	Specify	4-16d	2-10d	5665	5665
RHG3.125	HW3.125	3 1/2 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 3/4 x 12ga	3 1/4	Specify	4-16d	2-10d	5665	5665
RHG5.125	HW5.125	5 1/8 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	2 1/2 x 12ga	5 1/4	Specify	4-16d	2-10d	5665	5665
RHGF2.5	-	2 1/2 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 3/4 x 12ga	2 1/16	Specify	8-16d	2-10d	6070	6070
RHGF3.125	-	3 1/2 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 3/4 x 12ga	3 1/4	Specify	8-16d	2-10d	6885	6885
RHGF5.125	-	5 1/8 x Specify	2 1/2 x 3 1/4 x 1 1/4 x 10	3 3/4 x 12ga	5 1/4	Specify	8-16d	2-10d	6885	6885



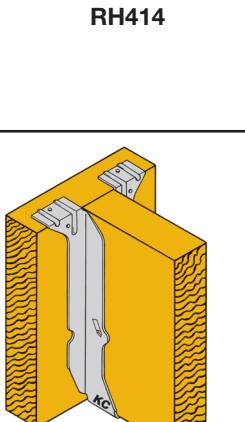
R410



RA414



RH414



TR210

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
			A	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
TR24N	PF24	2 X 4	1 1/2	3 1/16	4-16d	2-10d x 1 1/2	1305	1305	255
TR26N	PF26	2 X 6	1 1/2	5 1/8	4-16d	2-10d x 1 1/2	1370	1370	255
TR26	JB26	2 X 6	1 1/2	5 1/8	4-16d	2 prongs	1370	1370	-
TR28	JB28	2 X 8	1 1/2	7 1/4	4-16d	2 prongs	1370	1370	-
TR210	JB210	2 X 10	2	9 1/4	4-16d	2 prongs	1475	1610	-
TR212	JB212	2 X 12	2	11 1/8	6-16d	2 prongs	1745	1945	-
TR214	JB214	2 X 14	2	13 1/8	6-16d	2 prongs	1745	1945	-
TR216	JB216	2 X 16	2	15 1/8	6-16d	2 prongs	1745	1945	-

TRUSS HARDWARE

LHJT

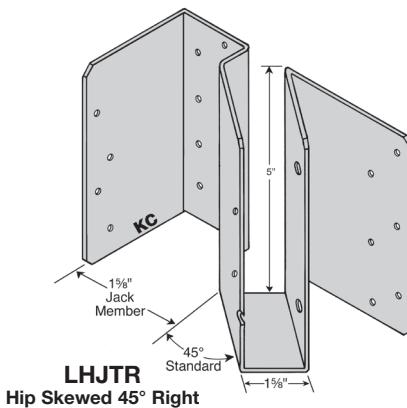
LIGHT HIP/JACK TRUSS HANGERS

Design Features . . a hip/jack connection which is a single, non-welded formation for use with a lighter-loaded double girder truss. Specify left or right.

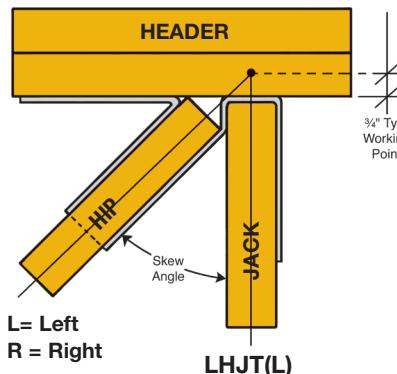
Material . . 18 ga. galvanized steel.

Special . . features of the LHJT include:

- Distributes 75% of the total load to the hip member.
- Must be attached to a double girder truss for required nail penetration.
- All multiple members must be fastened together to act as a single unit.



TOP VIEW



LMTH

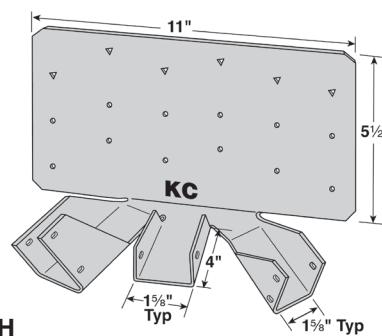
LIGHT MULTIPLE TRUSS HANGERS

Design Features . . a single-piece connector designed to carry multiple truss members off girder trusses with 2x4 or 2x6 bottom chords.

Material . . 16 ga. galvanized steel.

Installation . . use all specified fasteners

- The total load must be symmetrically distributed about the centerline to avoid eccentric loading of the connector.
- Fill round holes for girder trusses with 2x4 bottom chords.
- Fill round and triangle holes for girder trusses with 2x6 bottom chords.



MHJT

MEDIUM HIP/JACK TRUSS HANGERS

Design Features . . a hip/jack connection which is a single, non-welded formation for use with a heavier-loaded double girder truss.

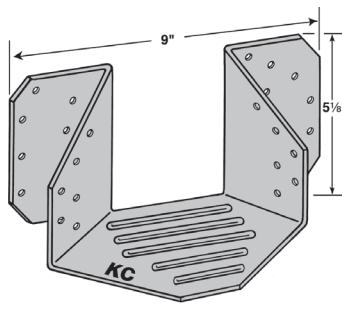
Material . . 14 ga. galvanized steel.

Special . . features of the MHJT include:

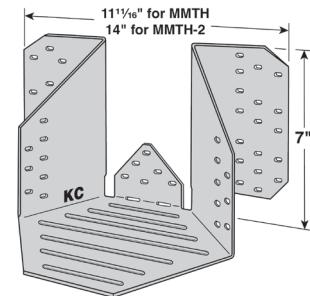
- Distributes 75% of the total load to the hip member.
- MHJT is for either right or left. No hanger mix-ups

Installation . . use all specified fasteners

- Must be attached to a double girder truss for required nail penetration.
- All multiple members must be fastened together to act as a single unit.



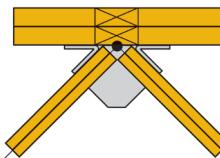
MHJT



MMTH/MMTH-2

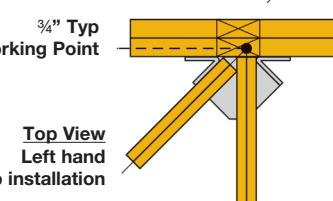
Typical Installation for MHJT/MMTH/MMTH-2

Working Point



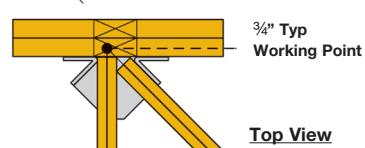
Top View
Left terminal hip without center common jack

3/4" Typ
Working Point



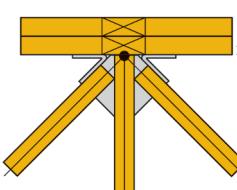
Top View
Left hand hip installation

3/4" Typ
Working Point



Top View
Right hand hip installation

3/4" Typ
Working Point



Top View
Terminal type installation (three member connection)

MMTH MMTH-2

MULTIPLE MEDIUM TRUSS HANGERS

Design Features . . a multiple truss connection which is a single, non-welded formation for use with medium to high load capacity hangers.

Material . . 12 ga. galvanized steel.

Installation . . all multiple members must be fastened together to act as a single unit.

- Distribute 40% of total load to each hip member and 20% to the jack for terminal installation.
- Distribute 75% of the total load to the hip member and 25% to the jack for left or right-hand hip installation.
- Use 10d x 1 1/2" nails with 0.67 of the design loads.
- For code-required minimum nail penetration, attach to a double girder truss.

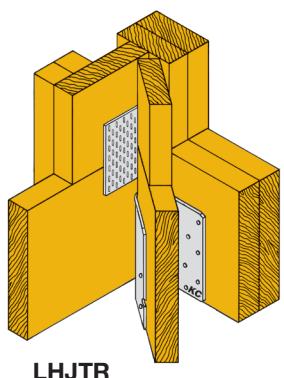
TRUSS HARDWARE

www.kcmetals.com

LHJT

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KC® STK NO	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)				UPLIFT LBS (133%)	
		HEADER		FLOOR (100%)		ROOF			
		12-10d		SNOW (115%)		CONST (125%)			
HIP									
LHJT (R/L)	LTHJR/L	4-10d x 1½		1140	1310	1425	1450	485	
		JACK							
		4-10d x 1½		365	420	455	485	315	

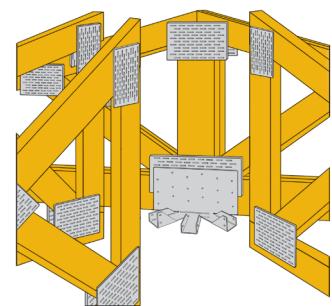


LHJT

LMTH

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

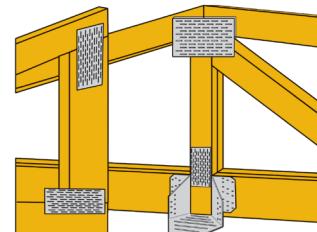
KC® STK NO	REF NO	HEADER	NAIL SCHEDULE			DESIGN LOAD (LBS)				UPLIFT LBS (133%)			
						FLOOR (100%)		ROOF					
			HEADER	HIPS (TOTAL)	JACK	HIP	JACK	HIP	JACK				
LMTH	LTHMA	1 ply 2 x 4	12-10d x 1½	6-10d x 1½	2-10d x 1½	465	115	560	125	560	125	65	25
		2 ply 2 x 4	12-10d	6-10d x 1½	2-10d x 1½	610	130	650	160	680	160	65	25
		1 ply 2 x 6	18-10d x 1½	6-10d x 1½	2-10d x 1½	640	140	640	145	640	145	65	25
		2 ply 2 x 6	18-10d	6-10d x 1½	2-10d x 1½	975	210	1120	230	1120	250	90	35



LMTH

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)				UPLIFT LBS (133%)	
		HEADER		FLOOR (100%)		ROOF			
		20-16D		SNOW (115%)	CONST (125%)	WIND (133%)			
MHJT	THJA26	HIP							
		6-10d x 1½		2295	2380	2440	2490	735	
		JACK							
		4-10d x 1½		750	795	810	830	250	

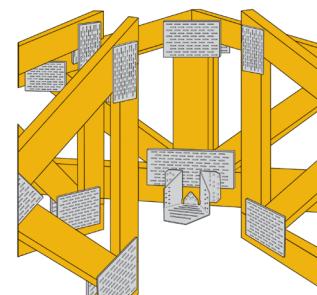


For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

RIGHT OR LEFT HAND HIP INSTALLATION (TWO MEMBER CONNECTION)					DESIGN LOAD (LBS)					UPLIFT LBS (133%)			
KC® STK NO	REF NO	HEADER	NAIL SCHEDULE			FLOOR (100%)		ROOF					
			CARRYING MEMBER	HIP	JACK			SNOW (115%)	CONST (125%)				
MMTH	MTHM	2 ply 2 x 4	22-16d	8-10d x 1½	4-10d x 1½	2430	800	2440	815	2440	815	845	305
		2 ply 2 x 6	34-16d	8-10d x 1½	4-10d x 1½	2915	950	2915	950	2915	950	845	305
		2 ply 2 x 8	42-16d	8-10d x 1½	4-10d x 1½	3400	1105	3400	1105	3400	1105	845	305
MMTH-2	MTHM-2	2 ply 2 x 6	39-16d	8-10d x 1½	4-10d x 1½	2915	950	2915	950	2915	950	845	305
		2 ply 2 x 8	47-16d	8-10d x 1½	4-10d x 1½	3400	1120	3400	1120	3400	1120	845	305

TERMINAL TYPE INSTALLATION (THREE MEMBER CONNECTION)

MMTH	MTHM	2 ply 2 x 4	22-16d	16-10d x 1½	4-10d x 1½	1280	640	1470	735	1560	780	775	435
		2 ply 2 x 6	34-16d	16-10d x 1½	4-10d x 1½	1900	950	1900	950	1900	950	775	435
MMTH-2	MTHM-2	2 ply 2 x 8	42-16d	16-10d x 1½	4-10d x 1½	2210	1105	2210	1105	2210	1105	775	435
		2 ply 2 x 6	39-16d	16-10d x 1½	4-10d x 1½	1900	950	1900	950	1900	950	775	435
		2 ply 2 x 8	47-16d	16-10d x 1½	4-10d x 1½	2550	1275	2550	1275	2550	1275	775	435



MMTH
MMTH-2

MTHTF2 MULTIPLE TRUSS HANGER

MTHTF2-2 TOP FLANGE

Design Features . . The MTHTF hanger is the largest capacity nail-on hanger available. This is a welded hanger designed to carry up to three trusses intersecting at one point into a double-ply girder truss. The top flange is notched at the center to accommodate vertical and diagonal web members in the girder truss.

Material . .

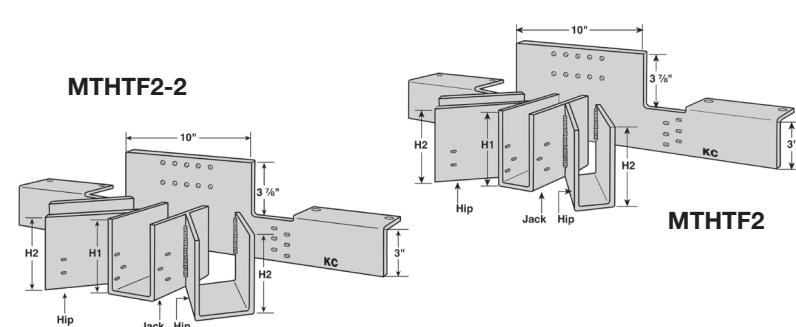
- **MTHTF2** – top flange 3 ga. steel, stirrup 11 ga. steel.
- **MTHTF2N** – top flange 3 ga. steel, stirrup 11 ga. steel.
- **MTHTF2-2** – top flange 3 ga. steel, stirrup 7 ga. steel.
- **MTHTF2-2N** – top flange 3 ga. steel, stirrup 7 ga. steel.

Finish . . KC® SUPERSPEED® gray paint.

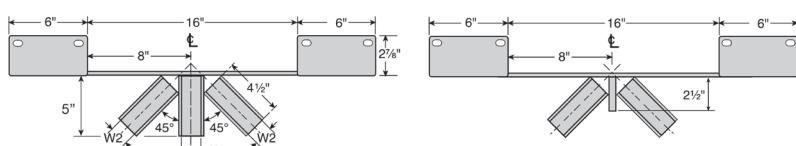
Installation . . Distribute the total load evenly about the centerline to avoid an eccentric loading condition.

- Multiple members must be fastened together by means other than the connector, to act as a single unit.
- For **MTHTF2** and **MTHTF2N**, a minimum 2 x 6 vertical member is required. For **MTHTF2-2** and **MTHTF2-2N**, a minimum of 2 x 8 vertical member is required.
- Bottom cord of header member must be a minimum of a 2 x 6.

Options . . For larger bottom cord, increase **H₁** and **H₂** accordingly. Maximum skew of hip stirrups is 45 degrees. For **MTHTF2**, maximum **W₁** and **W₂** is 3 1/16 inch. **W₁** and **W₂** must be the same.



Top View
MTHTF2-2 Similar



TGH2 (R/L)

TRUSS GIRDERS HANGERS SKEWED

Design Features . . for use with skewed multiple member girder truss conditions., specify right (R) or left (L).

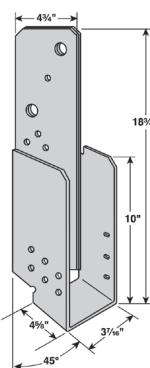
Fastener Schedule . .

- Carrying member, 2-3/4 MB and 4-lod nails.
- Carried member, 9-10d nails.

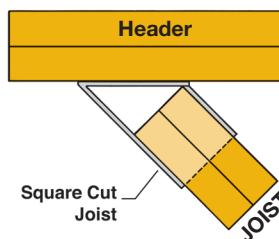
Material . . 10 gage galvanized steel.

Installation . . use all specified fasteners.

- Face nails are required to center the **TGH2 R/L** to the vertical carrying member.
- 2 x 6 is the minimum vertical carrying member.
- The total load must be evenly distributed about the centerline to avoid eccentric loading.
- 2 x 8 is the maximum bottom chord carrying member to allow for the minimum bolt end distance. 2 x 10 bottom chord take 0.62 of the design load.



Skewed Right



TGH TGHH TGHW

TRUSS GIRDERS HANGERS

Design Features . . a hanger designed to carry multiple member girder trusses, (2) 2 x 6, (3) 2 x 6 and (4) 2 x 6. Filler blocks must be used for this application.

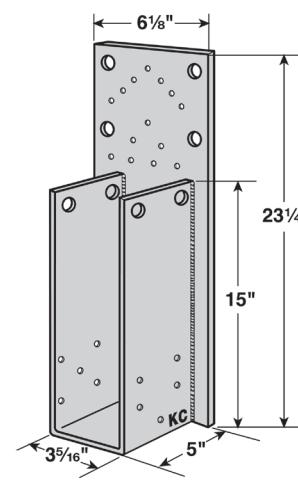
Material . . 1/4" steel.

Finish . . KC® SUPERSPEED® gray paint.

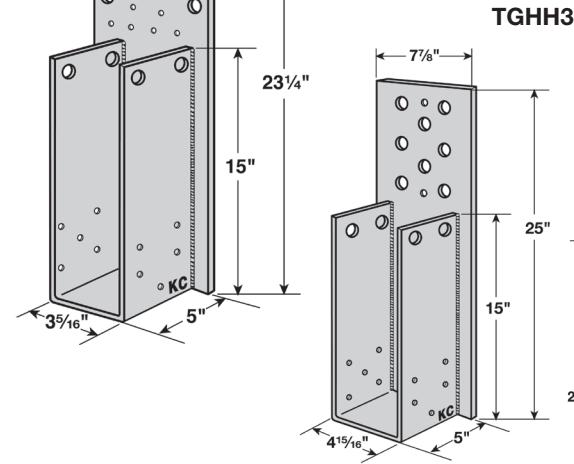
Special . . features of the **TGH** include:

- Minimum vertical carrying member size is 2 x 6 for the **TGH2** or the **TGH3** and 2 x 8 for the **TGH4**.
- Maximum bottom chord is 2 x 8.
- The **TGH** must be bolted to the center of the vertical carrying member.
- 10-10d must be used in the carried member. Uplift may be increased with extra nails; however, a filler block must be used.
- Bolts may be used with 10-10d nails for higher uplift values.
- All multiple members must be fastened together to act as a single unit.

Skewed Hangers . . available, specify angle (50° max) and whether left or right. Due to the infinite variety of custom orders, skewed hangers are not evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.



TGH2



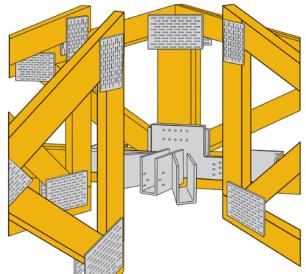
TGHH3

TGHW

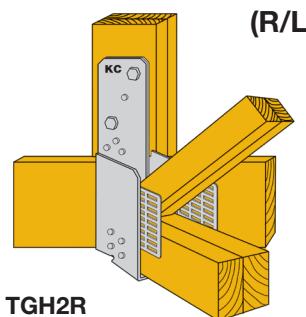


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KC® STK NO	REF NO	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD (LBS)						UPLIFT LBS	
						FLOOR (100%)		ROOF					
		W1 & W2	H1 & H2	HEADER	JOISTS	HIP	JACK	HIP	JACK	HIP	JACK	HIP	JACK
MTHTF2	MSCPT2	1½	5¼	26-16d	18-10d x 1½	3215	1600	3215	1600	3215	1600	765	380
MTHTF2N	MSCPT2N	1½	5¼	26-16d	14-10d x 1½	4015	—	4015	—	4015	—	765	—
MTHTF2-2	MSCPT2-2	3½	5¼	30-16d	20-10d	3600	1805	3600	1805	3600	1805	765	380
MTHTF2-2N	MSCPT2-2N	3½	5¼	30-16d	14-10d	4505	—	4505	—	4505	—	765	—

For Product Substitutions . . . the ONLY APPROVED EQUAL™

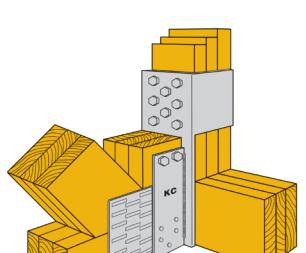
KC® STK NO	REF NO	NAIL & BOLT SCHEDULE			LENGTH OF BOLT IN CARRYING MEMBER	DESIGN LOAD (LBS)				UPLIFT (133%)	
		CARRYING MEMBER		CARRIED MEMBER		FLOOR (100%)	SNOW (115%)	CONST (125%)	WIND (133%)		
		BOLTS	NAILS			1½	1390	1560	1735		
TGH2 (R/L)	THG2AR/L	2-¾ MB	4-10d	9-10d	1½	1390	1560	1735	1890	1590	
					3	2790	3210	3490	3710		
					4½	3035	3490	3795	4035		
					6	3035	3490	3795	4035		



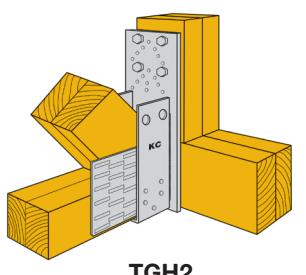
TGH2R

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	WIDTH (W)	NAIL & BOLT SCHEDULE		LENGTH OF BOLT IN CARRYING MEMBER (INCHES)	DESIGN LOAD (LBS)				UPLIFT
			CARRIED MEMBER	CARRYING MEMBER		FLOOR (100%)	SNOW (115%)	CONST (125%)	WIND (133%)	
TGH2	THGB2	3½	10-10d & 2-¾ MB	4-¾ MB	1½	3045	3500	3805	4050	8020
					3	5670	6520	7090	7540	
					4½	6245	7180	7805	8305	
					6	6245	7180	7805	8305	
TGH2	THGB2	3½	10-10d & 2-¾ MB	19-SDS ¼ x 3	3	6480	7450	8100	8615	8020
					4½	6480	7450	8100	8615	
					6	6480	7450	8100	8615	
TGH2H	THGBH2	3½	10-10d & 2-¾ MB	8-¾ MB	3	10340	10750	10750	10750	8020
					4½	10340	10750	10750	10750	
					6	10340	10750	10750	10750	
TGH3	THGB3	4½	10-10d & 2-¾ MB	4-¾ MB	1½	3045	3500	3805	4050	8020
					3	5670	6520	7090	7540	
					4½	6245	7180	7805	8305	
					6	6245	7180	7805	8305	
TGH3	THGB3	4½	10-10d & 2-¾ MB	19-SDS ¼ x 3	3	6480	7450	8100	8615	8020
					4½	6480	7450	8100	8615	
					6	6480	7450	8100	8615	
TGH3H	THGBH3	4½	10-10d & 2-¾ MB	8-¾ MB	3	10340	10750	10750	10750	8020
					4½	12490	12490	12490	12490	
					6	12490	12490	12490	12490	
TGH4H	THGBH4	6½	10-10d & 2-¾ MB	4-¾ MB	3	5670	6520	7090	7540	7540
					4½	6245	7180	7805	8305	
					6	6245	7180	7805	8305	
TGH4H	THGBH4	6½	10-10d & 2-¾ MB	6-¾ MB	3	8505	9780	9780	9780	8020
					4½	9780	9780	9780	9780	
					6	9780	9780	9780	9780	
TGHH4	THGBH4	6½	10-10d & 2-¾ MB	8-¾ MB	3	10340	10750	10750	10750	8020
					4½	12490	14360	14360	14360	
					6	12490	14360	14360	14360	
TGHW3	THGW3	4½	10-10d & 2-¾ MB	8-¾ MB	4½	21900	21900	21900	21900	8020
					6	21900	21900	21900	21900	
TGHW4	THGW4	6½	10-10d & 2-¾ MB	8-¾ MB	4½	24225	24225	24225	24225	



TGHW3



TGHW2

ATH ADJUSTABLE TRUSS HANGERS

Design Features . . the hanger's long header straps can be field bent to the required height of the truss. The joist side flanges have round holes so that the nails can be driven straight into the joist and regular nailing straight into the header flange. This hanger has been designed and developed for the truss plated industry.

- **Joist sizes** . . 2xs, 4xs and double 2xs.

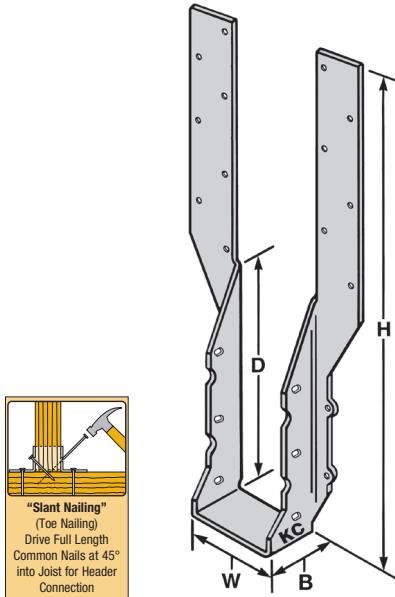
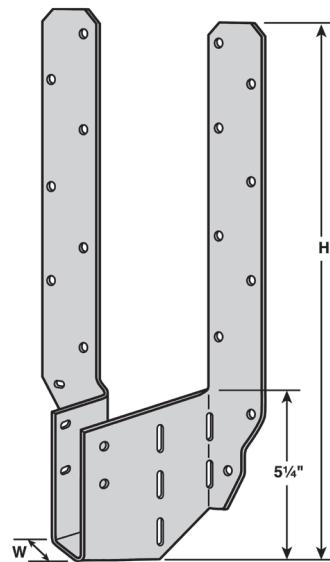
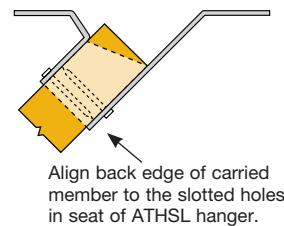
Material . . 18 ga. and 16 ga. galvanized steel.

Loads . . nailing schedule and design load capacities are consistent with those obtained in independent laboratory tests.

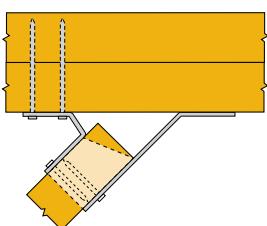
Special . . the **ATH** series offers a wide application flexibility, particularly to the truss plated industry, including five different versions:

- (1) **Ceiling hanger**
- (2) **Universal or face mount hanger**
- (3) **Top flange hanger**
- (4) **Top flange over the back hanger**
- (5) **Skewed hanger at 45° (right & left)**

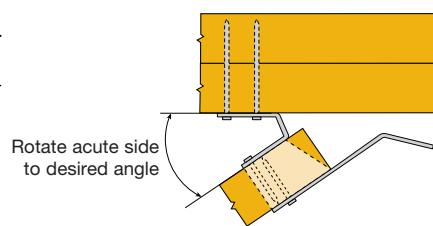
Stocked skewed hangers are designed for standardization and construction economies, and to provide compatibility with the **ATH** hanger hardware line.

ATH418**ATHSL218****ATHIS (L & R) ATHS (L & R) Installation Sequence**

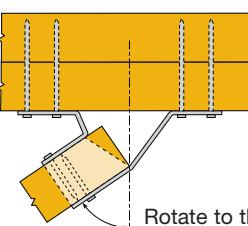
Step 1
Install carried member into the seat of the hanger. Secure with 4 10d x 1 1/2" nails.



Step 2
Install 10d nails into header on the acute angle side first.



Step 3
Adjust acute side of hanger to the desired angle.



Step 4
Adjust obtuse side of hanger flush with the carrying member. Install 10d nails into header on obtuse side.

ATHI ADJUSTABLE TRUSS HANGERS**ATHISL I-JOIST**

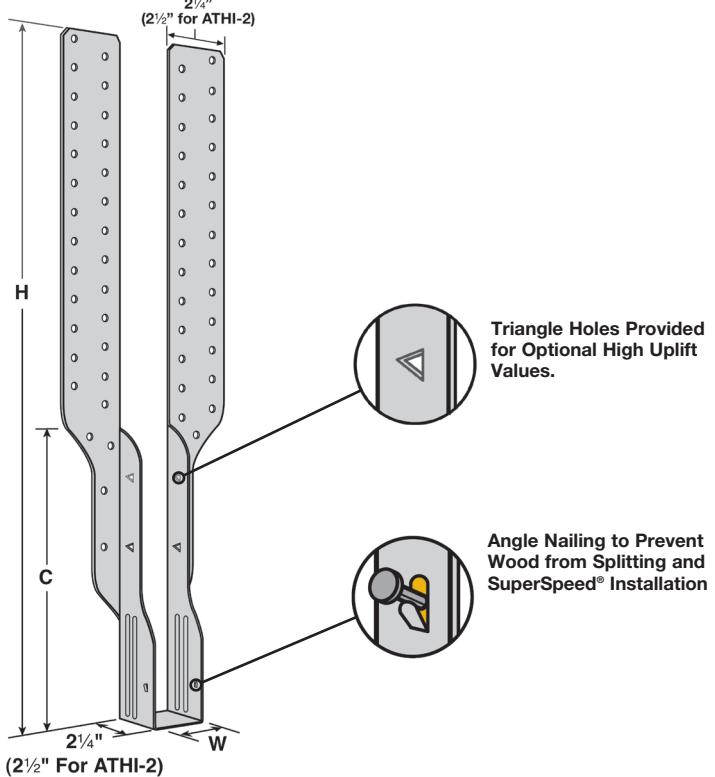
Design Features . . designed for the wood I-joists industry, the **ATHI** has long header straps that can be field-bent to the required height of the truss. Positive angle nailing helps eliminate splitting of the I-joist's bottom chord.

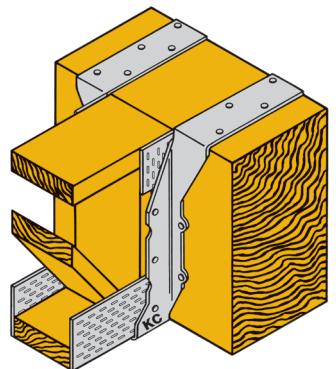
Material . . **ATHI-2** – 14 ga. galvanized steel.
ATHI – 18 ga. galvanized steel.

Special . . stocked skewed hangers are designed for standardization and construction economies, and to provide compatibility with the **ATHI** hanger hardware line. (**ATHI 1.81/22 only**)

Installation . . **ATHI-2** hangers are available in widths between 3 and 5 1/4 inches. Specify width at time of order.

- Use all specified nails indicated in the table. Verify that the header dimensions will accommodate the specified nails.
- These hangers require the use of web stiffeners.
- 20 face nails for **ATHI**, and 30 face nails for **ATHI-2** achieves maximum table load.
- When less than the maximum number of nails listed are used, allowable load must be reduced for each nail eliminated.
- For minimum nailing configuration, hanger strap must be field bent over top of header a minimum of 2 1/2 inches.

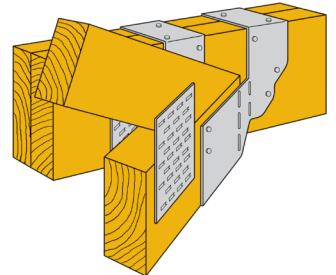
ATHI



ATH418

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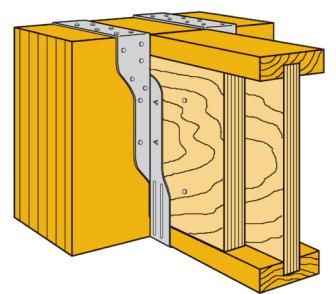
KC® STK NO	REF NO	NAIL SCHEDULE			DESIGN LOAD (LBS)			UPLIFT (133%)	
		TOP	FACE	JOIST	LVL/DF/SP SPECIES HEADER				
					FLOOR (100%)	SNOW (115%)	ROOF (125%)		
FACTORY SKEW 45°									
ATHSL/R 218 Min	THASL/R218 Min	4-10d	6-10d	4-10d x 1½	1430	1430	1430	350	
ATHSL/R 218 Max	THASL/R218 Max	-	14-10d	4-10d x 1½	1430	1430	1430	350	
ATHSL/R 218-2 Min	THASL/R218-2 Min	4-10d	6-10d	4-10d x 1½	1430	1430	1430	350	
ATHSL/R 218-2 Max	THASL/R218-2 Max	-	12-10d	4-10d x 1½	1350	1430	1430	350	
FIELD SKEW 46° TO 84°									
ATHSL/R 218 Min	THASL/R 218 Min	4-10d	6-10d	4-10d x 1½	1215	1215	1215	350	
ATHSL/R 218 Max	THASL/R 218 Max	-	12-10d	4-10d x 1½	1215	1215	1215	350	
ATHSL/R 218-2 Min	THASL/R 218-2 Min	4-10d	6-10d	4-10d x 1½	1215	1215	1215	350	
ATHSL/R 218-2 Max	THASL/R 218-2 Max	-	12-10d	4-10d x 1½	1215	1215	1215	350	



ATHSL218

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	JOIST DIMENSIONS (INCHES)		HANGER DIMENSIONS (INCHES)		
		WIDTH	DEPTH	W	H	C
ATHI 222	THAI 222	1½	9¼ -14	1⅓/16	22⅜	9⅓/8
ATHI 1.68/22	THAI 1.68/22	1⅓/8	9¼ -14	1⅓/16	22⅔	9⅓/16
ATHI 1.81/22	THAI 1.81/22	1¾	9¼ -14	1⅓/16	22⅔	9¼
ATHI 3522	THAI 3522	2¼ to 2⅓/16	9¼ -14	2⅓/16	22½	9
ATHI 322	THAI 322	2½	9¼ -14	2⅓/16	22⅔	8⅓/8
ATHI 2.68/22	THAI 2.68/22	2⅓/8	9¼ -14	2⅓/16	22⅔	8⅓/16
ATHI 422	THAI 422	3½	9¼ -14	3⅓/16	21⅓/8	8⅓/8
ATHI-2	THAI-2	3 to 5¼	9¼ -14	3⅓/8 to 5⅓/16	22⅓/16	8⅓/16

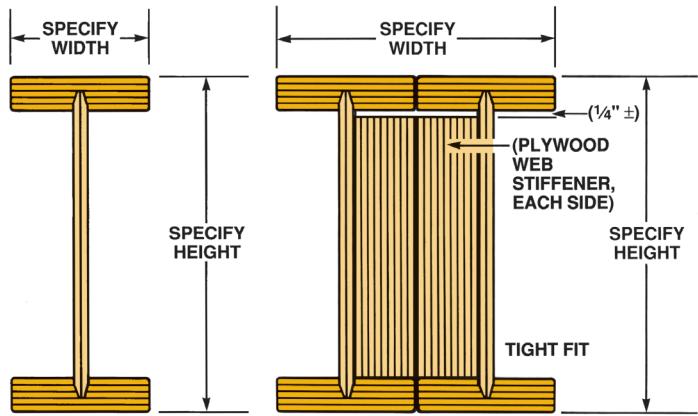


ATHI

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO (NAILING OPTIONS)	REF NO	NAIL SCHEDULE (INCHES)			DESIGN LOAD (LBS)			UPLIFT (133%)	
		TOP	FACE	JOIST	LVL/DF/SP SPECIES HEADER				
					FLOOR (100%)	SNOW (115%)	FLOOR (125%)		
ATHI Min	THAI Min	4-10d x 1½	2-10d x 1½	2-10d x 1½	1475	1475	1475	—	
		4-10d	2-10d	2-10d x 1½	1805	1805	1805		
ATHI Max	THAI Max	—	20-10d	2-10d x 1½	2245	2280	2280	215	
ATHI-2 Min	THAI-2 Min	4-10d	2-10d	2-10d x 1½	2195	2195	2195	—	
ATHI-2 Max	THAI-2 Max	—	30-10d	2-10d x 1½	3445	3960	3960	215	

ORDERING INFORMATION FOR WOOD I-JOIST CONNECTORS



Ordering information . . .

- Select style or type of hanger.
(Example: RA style or RS type)
- Specify series or width.
(Example: 35 Series = 2 $\frac{3}{8}$ "")
- Specify height in inches.
(Example: 18 = 18")

Specify . . .

- RA – hanger style or type load.
RA35 – – hanger series (width).
RA -- 18 hanger height (inches).
RA3518

Wood I-Joist Sizes

Single:	Double: (-2)
2 Series (2x)..... W = 1 $\frac{1}{16}$ "	2 Series-2 (2x) W = 3 $\frac{1}{16}$ "
25 Series W = 1 $\frac{13}{16}$ "	25 Series-2 W = 3 $\frac{1}{16}$ "
2.06 Series W = 2 $\frac{1}{16}$ "	2.06 Series W = 4 $\frac{1}{8}$ "
35 Series W = 2 $\frac{3}{8}$ "	35 Series-2 W = 4 $\frac{13}{16}$ "
3 Series (3x)..... W = 2 $\frac{9}{16}$ "	3 Series-2 (3x) W = 5 $\frac{1}{8}$ "
4 Series (4x)..... W = 3 $\frac{3}{16}$ "	4 Series-2 (4x) W = 7 $\frac{1}{8}$ "

DESIGNER AND INSTALLER INSTRUCTIONS

A. Refer to the wood I-joist manufacturer's product catalog for the wood I-joist series given in the table for wood I-joist sizes.

B. Determine that the top plate will take the required nails as shown in the catalog tables. Contact the wood I-joist or engineering wood beam producer for nailing limitations when laminated engineered lumber is used as top plates and nails penetrate parallel to the glue line.

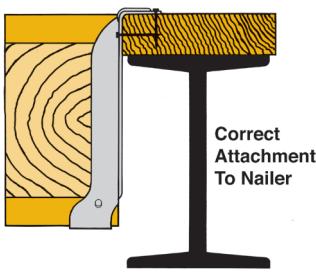
C. With the many types of wood I-joists available, **the design loads given are hanger design loads attached to Douglas fir, larch or southern pine top plates and do not reflect the design load of the wood I-joist**. Loads must be reduced where wood

shear capacity or seat-bearing and joist nailing result in lower values. Contact your wood I-joist manufacturer's representative for wood I-joist allowable loads.

D. For proper web stiffener requirements (web stiffeners and backing blocks may not always be required) recommended nailing and nail limitations, refer to the wood I-joist manufacturer's installation instructions. Follow all requirements for blocking, wood stiffeners, fillers and temporary bracing.

E. Do not allow workers on the framing system until all hangers, blocking and bracing have been nailed and installed.

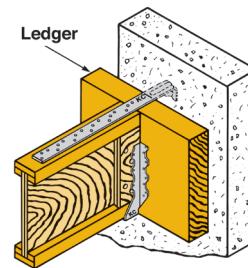
COMMON INSTALLATION ERRORS WITH USE OF A NAILER



What are Nailers and Ledgers?

A wood naler is a plate which attaches to the wall support. A naler may be used in conjunction with a steel I-beam, concrete block wall, stem wall or other support. The beams, joist and sheathing then attach to the naler. When choosing a naler, consider installation requirements, job needs and available resources.

A ledger is similar to a naler, however, the wide dimension of a ledger is vertical rather than horizontal, as with the naler.

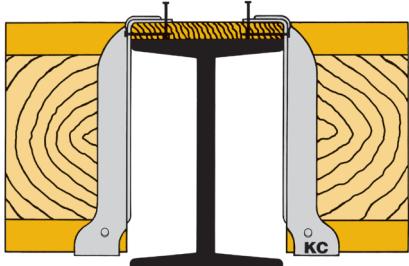


🚫 Naler too Thin . . .

If the selected naler is too thin, the following may occur:

1. The nails will not penetrate fully.
2. Room will not allow use of all face nails required for certain hangers.
3. Splits in the naler will result from nails penetrating through the I-beam.

Note: Substitution of shorter nails reduces the allowable load values.

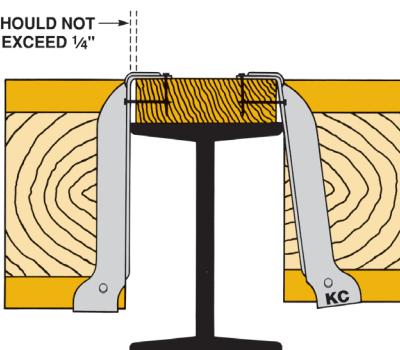


🚫 Naler too Narrow . . .

If the selected naler is too narrow, the following will be necessary:

1. The hanger must be cantilevered out for clearance or
2. The hanger must be tilted back for top flange support.

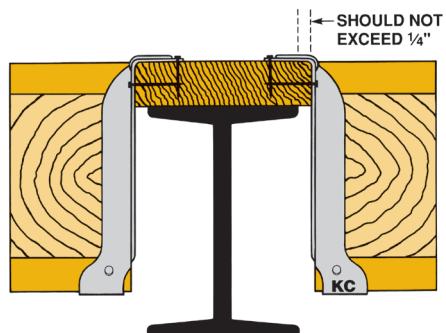
Note: Naler should not be more than 1/4" narrower or load values will be greatly reduced.



🚫 Naler too Wide . . .

Cross-grain bending may result if the naler is wider than the I-beam.

Note: An overhang of more than 1/4" is not recommended.



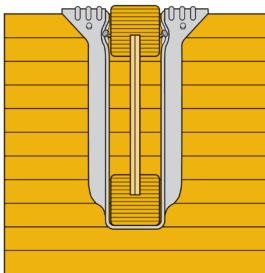
* Warning: Do not allow the joist hanger to contact the steel I-beam or the concrete wall. This may cause squeaking noises.

INSTALLATION ERRORS FOR TOP MOUNT HANGERS

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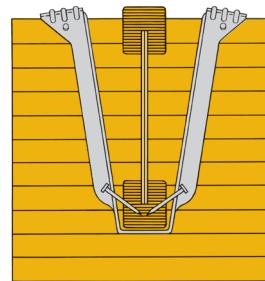
Toe Nailed I-Joist

Do not toe nail wood I-joist to headers prior to installing hangers of any type. Toe nailing results in improper hanger installation resulting in gaps and a loose connection, and is a major cause of squeaks.



Hanger Over-Spread on Glu-lam Header

Top flanges spread wider than the wood I-joist can raise the wood I-joist above the header. This condition can cause squeaky floors.



Hanger Not Plumb

A hanger cantilevered out from the header can also cause floor squeaking.



ENGINEERED WOOD PRODUCT SIZES

LVL and PSL

Laminated veneer lumber (**LVL**) is engineered with sheets of thin veneer structurally bonded together to make headers and beams which span much longer distances and support heavier loads than ordinary lumber. **LVL** headers and beams are available in the following sizes:

Parallel strand lumber (**PSL**) is made from long, thin strands of wood structurally bonded together in a process to make large cross section beams and columns. **PSL** headers and beams are available in the following sizes:

PSL columns and posts are available in the following sizes:

W = 1 13/16"	W = 2 3/4"	W = 3 3/16"	W = 5 5/8"	W = 7 1/8"
1 3/4 x 7	2 1/16 x 9 1/2	3 1/2 x 3 1/2	5 1/4 x 5 1/4	7 x 7
1 3/4 x 9 1/4	2 1/16 x 11 1/8	3 1/2 x 5 1/4	5 1/4 x 7	7 x 9 1/4
1 3/4 x 9 1/2	2 1/16 x 14	3 1/2 x 7	5 1/4 x 9 1/4	7 x 11 1/4
1 3/4 x 11 1/4		3 1/2 x 9 1/2	5 1/4 x 11 1/4	7 x 14
1 3/4 x 11 1/8		3 1/2 x 11 1/4	5 1/4 x 11 1/8	7 x 16
1 3/4 x 12		3 1/2 x 11 1/8	5 1/4 x 12	7 x 18
1 3/4 x 14		3 1/2 x 12	5 1/4 x 14	
1 3/4 x 16		3 1/2 x 14	5 1/4 x 16	
1 3/4 x 18		3 1/2 x 16	5 1/4 x 18	
		3 1/2 x 18		

SUPERSPEED DRIVE SCREW INSTALLATION FOR LVL

Installation:

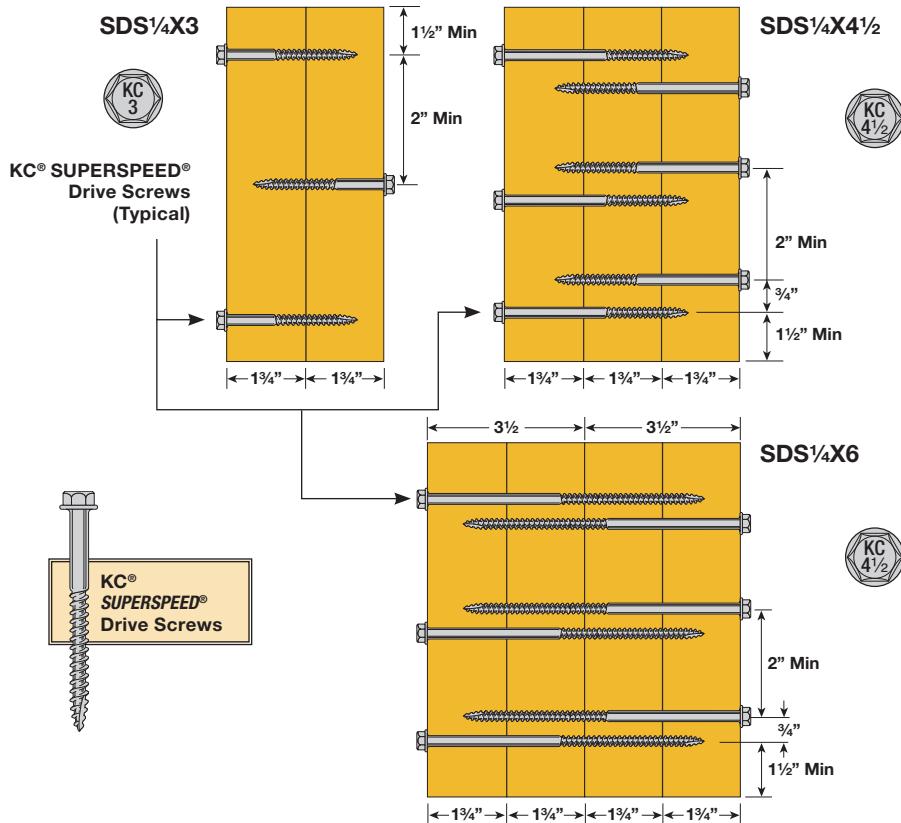
- Pre drilling in **LVL** is not required.
- Install with minimum 5.5 amp variable speed drill.
- Drive screw head washer flush with wood surface, Do not overdrive screws.
- Offset screws that overlap minimum 3/4" on center.

Design:

- Apply adjustment factors per 2001 NDS.
- Loads are for **LVL & PSL** material Douglas Fir-Larch (G = 0.5)
- Spacing along length of beam (Parallel to grain) minimum 6 inches. End distance minimum 4 inches.
- Table loads are screw capacity to transfer load between plies. Built-up **LVL/PSL** capacity may be less. Check with manufacturers.
- Provide adequate Lateral Bracing against tension due to side framing into main beam.

Max Allowable Loads (LBS per Linear ft.)

Framing Combination	12' 0"	16' 0"	24' 0"
2 - 1 3/4"	1450	1080	725
3 - 1 3/4"	2075	1555	1040
4 - 1 3/4"			
2 - 3 1/2"			
1 - 3 1/2" +			
2 - 1 3/4"	1900	1425	950

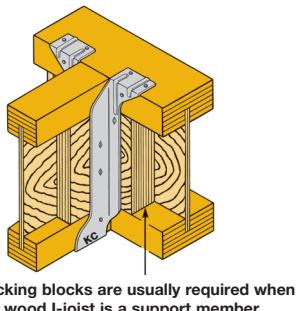


METALS PRODUCTS, INC.
SUPERSPEED® CONNECTORS

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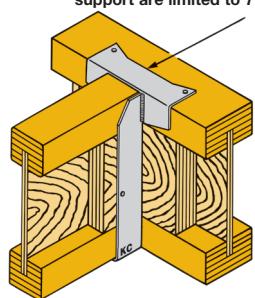
TOP MOUNT HANGERS

Onto Wood I-Joists . . .

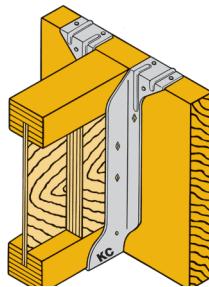
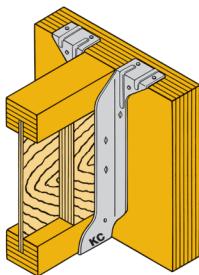


Backing blocks are usually required when the wood I-joist is a support member.

The bent angles forming the hanger support are limited to 7 ga.

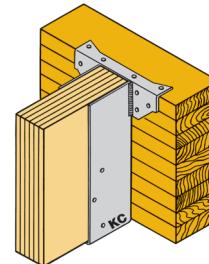
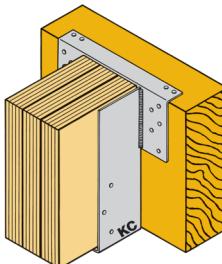


- The maximum size nail permitted into the edge or face of the joist's top flange is limited to a 10d (9 ga.), with a length of 1½" to prevent splitting.
- Onto Laminated Veneer Lumber (LVL) or Dimension Lumber . . .**



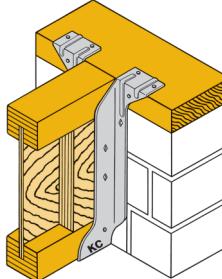
- Nailing into the narrow face of LVL/Laminated Veneer Lumber (up to 1¾" thickness), PSL/Parallel Strand Lumber (Parallam®) or dimension lumber (2x_), headers and beams is limited to 16d (8 ga.) or smaller nails. (Consult the engineered wood beam manufacturer.)

Onto Glu-lam or Heavy Timber Beams . . .

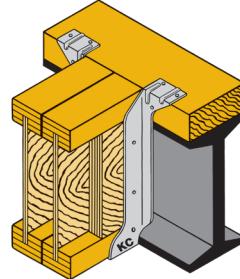


- Nailing into the face and top of the glu-lam or heavy timber beams is limited to what prevents splitting of the support member.

onto Nailers . . .



2x_Nailers

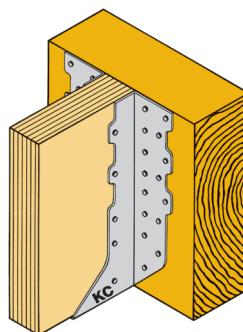
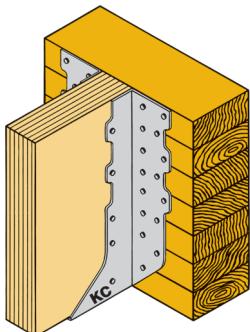


3x_ or 4x_Nailers

- For 2x_nailers measuring 1½" thick, the top flange nails are limited to 10d (9 ga.) by 1½" long.
- Nailing on 3x_ or 4x_nailers is limited to 20d (6 ga.) by 2½" long or smaller nailers.

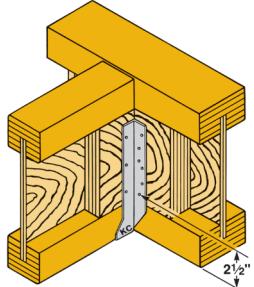
FACE MOUNT HANGERS

Onto Glu-lam or Heavy Timber Beams . . .



- Nailing into the face of glu-lam or heavy timber beams is limited to what prevents splitting of the wood support member.

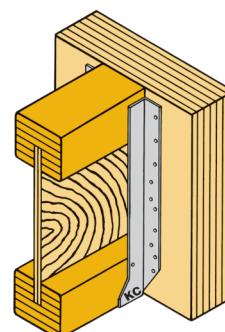
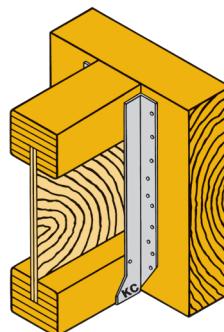
onto Wood I-Joists . . .



The first nail into the web area of the support joist should be positioned high enough (2½"±).

- The maximum size in the web area of the support joist is limited to 16d (8 ga.) to prevent damage to the support joists, web material and splitting of the backer block material.
- Backing blocks are required on both sides of the supporting members.
- Nails must fully penetrate the joist web. Minimum length 1½" widths to 1¾" 2½" widths to 3½"
- Maximum size 16d

Onto Laminated Veneer Lumber (LVL) or Dimensional Lumber . . .



- Nailing into the wide face of LVL or PSL (up to 1¾" thickness) or dimensional lumber (2x_), headers and beams is limited to 20d (6 ga.) or smaller nails.

To Design a Quality Floor System

1. Using a deeper joist will reduce deflection.
2. Load sharing will be improved by using thicker floor sheathing and/or reducing on-center spacing of joists.
3. Improved floor stiffness and prevention of floor squeaking will be achieved through use of adhesives to permanently bond sheathing to the joist and use of screws rather than nails.
4. Ceilings which are directly applied, bridging, bottom chord stripping or full depth blocking will improve floor design.
5. Critical concerns are quality workmanship in the field and proper storage of construction materials before use. The job also must have full joist bearing, level supports, floor sheathing properly installed and care in use and installation of fasteners.

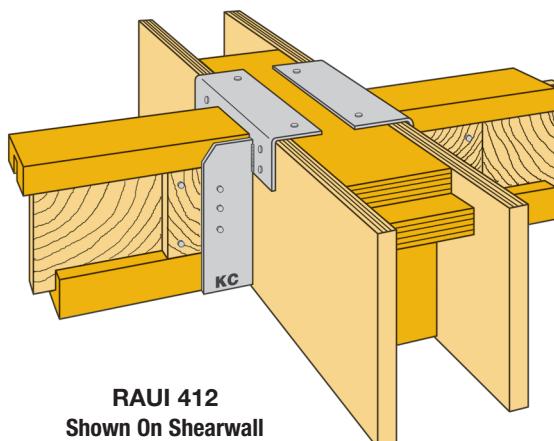
The following table lists Top Flange hangers which are suitable for installation on shearwalls with adjustments to allowable loads where appropriate. Face mount hangers are not suitable for this type of installation.

Please note:

- 1) The shearwall must be correctly nailed to the top plates, and studs, prior to installation of the hanger.
- 2) The table design load is for a maximum of $\frac{3}{8}$ " inch plywood.
- 3) The plywood edge must bear fully on the underside of the hanger top flange.

HANGER TYPE	NAIL SCHEDULE			DESIGN LOAD (LBS)	
	HEADER NAILING (1)		JOIST NAILING	DESIGN LOAD (LBS)	
	TOP	FACE		DOWN (1)	UPLIFT (2)
TR	4-10d	2-10d	2-10d x $1\frac{1}{2}$ "	1200	245
TR	4-16d	2-16d	2-10d x $1\frac{1}{2}$ "	1650	245
MTR	4-16d	2-16d	2-10d x $1\frac{1}{2}$ "	2300	245
HTR	4-16d	6-16d	2-10d x $1\frac{1}{2}$ "	3125	245
R/RI	2-10d	----	2-10d x $1\frac{1}{2}$ "	2350	----
RA/RAI	2-16d	----	2-10d x $1\frac{1}{2}$ "	3175	----
RAU/RAUI	2-16d	4-16d	6-10d x $1\frac{1}{2}$ "	3850	750 (3)
RH/RHI	4-16d	----	2-10d x $1\frac{1}{2}$ "	4175	----
RHU/RHUI	4-16d	4-16d	6-10d x $1\frac{1}{2}$ "	4500	750 (3)

- 1) Design downloads may not be increased for duration.
- 2) Uplift loads are @ 133% duration for wind or earthquake, reduce uplift loads for cantilever conditions. Uplift on some hangers may be increased with the use of alternate joist nailing. Refer to table on relevant hanger for alternate nailing uplift.
- 3) Uplift on RAU/RHU style hangers is for 18 inch depth maximum and must be adjusted for deeper depths.
- 4) All R/RI, RA/RAU, RH/RHU welded Style hangers require the use of web stiffeners for correct joist nailing. 10d commons may be used for joist nailing of welded style hangers where the width is a minimum of 3 inches.
- 5) Reference to 10d and 16d are for common nails. Use of 16d sinkers achieves the same allowable load as 10d commons. Please refer to the nail schedule table for correct dimensions of nails.



LOAD VALUE INFORMATION

Allowable load values are based on current UBC criteria and governed by the following:

1. The allowable wood bearing perpendicular to the grain and/or the allowable load for fasteners. The area, in square inches, that the hanger bears on the wood is calculated, and this area is multiplied times the allowable load perpendicular to the grain for the specified species of wood (usually Douglas fir-Larch). The allowable load value for the specified fasteners (nails or bolts) is added to this value. Sometimes the allowable load value of the fasteners governs the allowable load: i.e.: face mounted hangers ("E", "H", or "S"), the allowable lateral value for the header nails may govern. Three (3) test assemblies are required to be tested with the lowest value governing.
2. Test load at which $\frac{1}{8}$ " (.125") of hanger-supported deflection was measured. This value is found by using dial indicators. This is a device, which measures movement to within .001". For comparison purposes, an average piece of typing paper is .004" thick. The dial indicators are placed on the wood member next to the metal hanger. This method more accurately measures movement in an actual application condition.
3. Test ultimate load divided by an appropriate safety factor, which is usually 3. After $\frac{1}{8}$ " deflection is reached during the load process, the dial indicators are removed to prevent them from being damaged. Loading continues until actual failure of the test assembly occurs. This is known as the "ultimate". Actual failure may be caused by wood (joist or header), metal connector or fastener failure. This supports the importance of the use of proper fasteners. The lowest test ultimate is then divided by the appropriate safety factor thus determining the allowable test load. The safety factor is generally a factor of "3" (as per ICC criteria), but this number sometimes varies.

$$\begin{array}{lll} \text{Example: Lowest load value} & = & 3000 \text{ lbs.} \\ \text{Safety factor} & = & 3 \\ \text{Maximum allowable load} & = & \frac{3000 \text{ lbs.}}{3} = 1000 \text{ lbs.} \end{array}$$

The lowest load derived from the proceeding information is the allowable normal load (100%). This load may also be the maximum load as well. The calculated load values may be increased for the duration of the load according to code. Test loads, however, may never be increased, nor may the duration of the load increase exceed any test governed load.

Load Percentages

- 100% Full time duration..... "Usual normal"
 115% 2 month maximum duration
 125% 7 day maximum duration..... "Usual maximum"
 133% Wind/seismic loading "Usual uplift/strap tension"

To Compute the Allowable Hanger Load for Wood I-Joists

Nails into the side of the joist can be used to reduce the required bearing length only if the joist requires web stiffeners. Nails into the bottom flange of joist that do not require web stiffeners do not decrease the required bearing length.

The 100% load capacity for a hanger is the lesser of the 100% hanger load capacity or the allowable joist-bearing value in the hanger.

Product Application Assurance

1. An essential component for assessing hanger compatibility is the **compatibility calculations** (the difference between solid sawn lumber and wood I-joists). This incompatibility will have a lower capacity for most typical bearing conditions.
2. Considerable concern is the basic issue of compatibility. The nail size and location dramatically affect the combined performance of the wood I-joists and hangers.
3. Suitability of the supporting member is not limited to large solid-sawn or glulam beams - other support members can be (A.) wood I-joists, (B.) laminated veneer lumber or (C.) 2x - solid sawn member.

TOP MOUNT HANGERS (Self-Jigging) and (Grip Lock™)

ISU

FACE MOUNT HANGERS (SELF-JIGGING TO HEADER)

Design Features . . The ISU series hanger is a modified face mount and top mount flange hanger engineered for shallow flange and standard flange wood I-joist ($1\frac{1}{8}$ " and $1\frac{1}{2}$ ") flange thickness. The new ISU self jigging locator tabs (top flange) for face mount hangers, no more measuring for height of hanger and wood I-joist. Just locate hanger to the header and get ready to nail the hanger flange first, and then second, push the wood I-joist into the hanger joist section (joist nails are not required) "SUPERSPEED® Grip Lock™" is the fastening system - no squeaks!

If nails are required for wood I-joist bottom flange use tabs as a guide for angle nailing.

Some hanger series have triangle holes in header for (minimum and maximum) nailing and design loads.

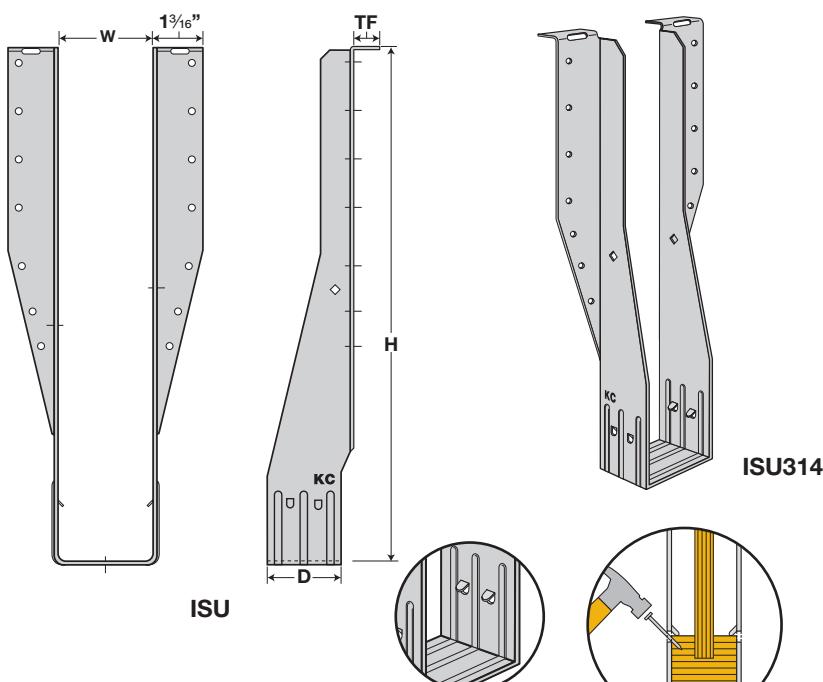
Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flanges for accurate header connection: guarantee uniformity and high quality.

WOOD I-JOIST SIZES

- 2 series (2x) – W = $1\frac{1}{8}$ "
- 25 series – W = $1\frac{1}{16}$ "
- 2.06** series – W = $2\frac{1}{16}$ "
- 35 series – W = $2\frac{3}{8}$ "
- 3 series (3x) – W = $2\frac{9}{16}$ "
- 4 series (4x) – W = $3\frac{1}{16}$ "

Material . . 2" section – 18 ga. galvanized steel.

Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.



IMPORTANT

Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

TRS

TOP MOUNT HANGERS (GRIP LOCK™ TO WOOD I-JOIST)

The TRS series hanger is a cross design style between the hybrid SUI series and the standard TR series. The TRS hangers are designed and engineered for shallow flange and standard flange I-joist ($1\frac{1}{8}$ " and $1\frac{1}{2}$ ") flange thickness. KC® Metal

Products has combined both hangers to create the new TRS series hanger. This new TRS hanger is a fast (self jigging) and **high load** value hanger at a value price using economy engineering for the construction framing labor force.

The top flange sets the height for the TRS hanger and the wood I-joist. First nail top flange down into header, second, nail header face nails, third, push wood I-joist into place. (No joist nails are required).

SUPERSPEED® Grip Lock™ is the fastening system - no squeaks!

If nails are required for wood I-joist bottom flange use tabs as a guide for angle nailing.

Some hanger series have triangle holes in header for (minimum and maximum) nailing and design loads.

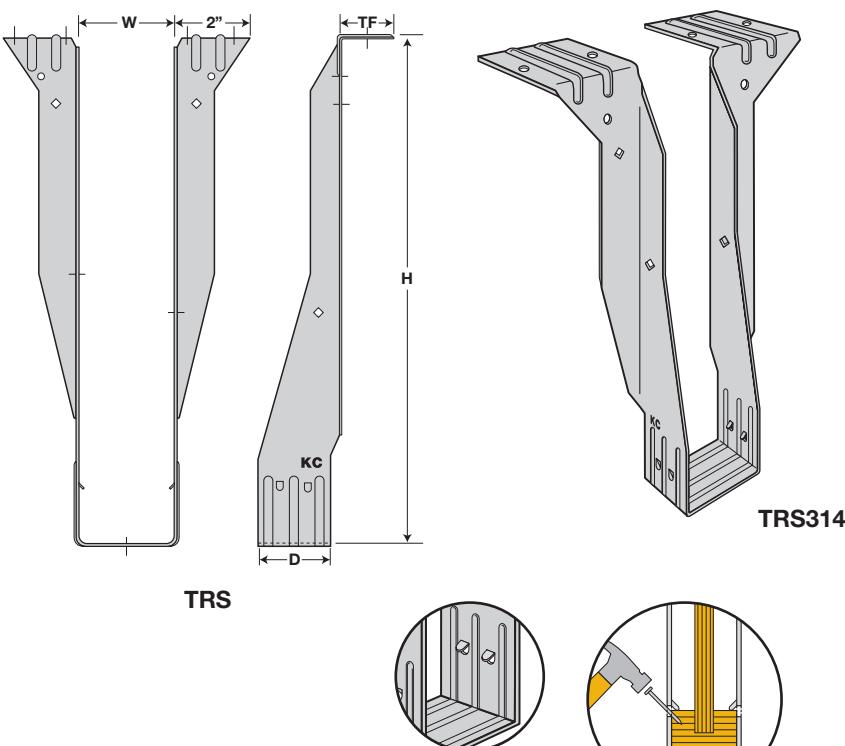
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TOP MOUNT HANGERS (Self-Jigging) AND (Grip Lock™)

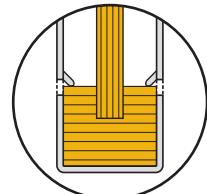
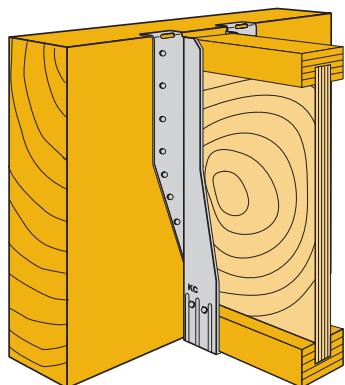
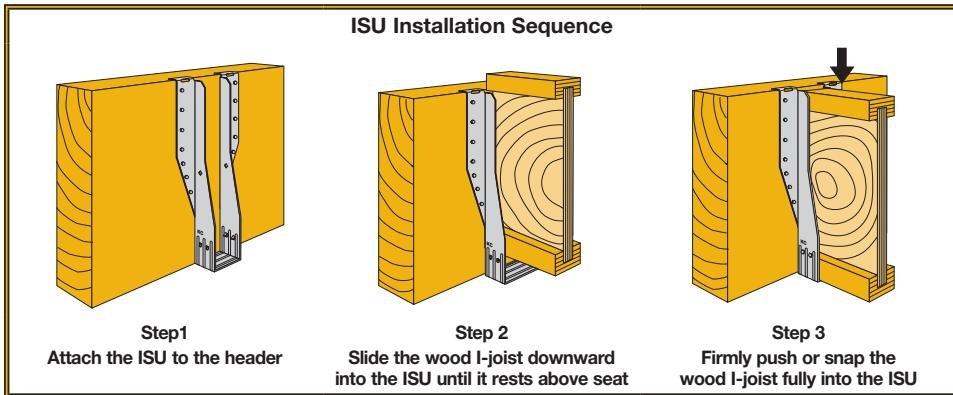
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For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
ISU - - 9.5	IUS - - 9.5	2	Specify	9½	¾	8-10d	—	950	1170	75
ISU - - 11.88	IUS - - 11.88	2	Specify	11½	¾	10-10d	—	1185	1465	75
ISU - - 14 (Min)	IUS - - 14 (Min)	2	Specify	14	¾	12-10d	—	1420	1755	75
ISU - - 14 (Max)	IUS - - 14 (Max)	2	Specify	14	¾	14-10d	—	1660	1980	75
ISU - - 16 (Min)	IUS - - 16 (Min)	2	Specify	16	¾	14-10d	—	1660	1980	75
ISU - - 16 (Max)	IUS - - 16 (Max)	2	Specify	16	¾	16-10d	—	1895	1980	75

Optional Joist Nailing

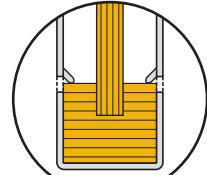
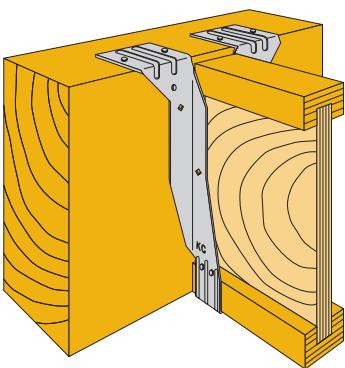
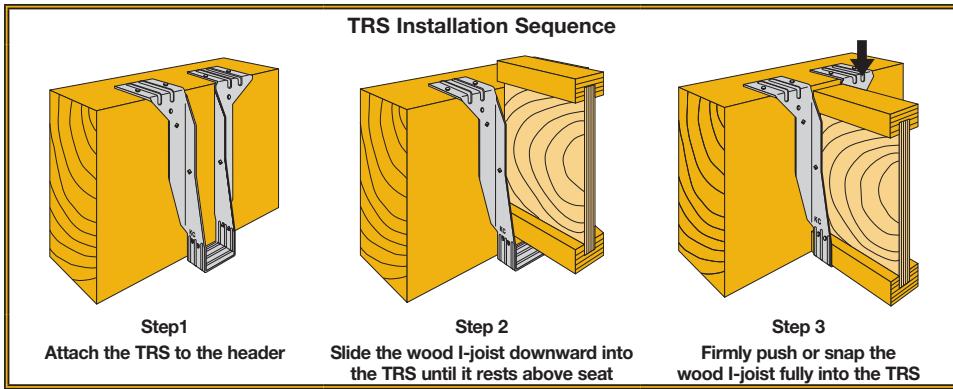
- a) Add 2-10d x 1½ into joist flange = 240 lbs uplift
- b) Add 4-10d x 1½ with web fillers = 480 lbs uplift



For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE			DESIGN LOAD			UPLIFT LBS 133%	
		D	W	H	TF	TOP FLANGE	FACE	JOIST	DF/SP LVL	PSL	LSL	SPF	
TRS - - 9.5	ITS - - 9.5	2	Specify	9½	1⅜	4-10d x 1½	2-10d x 1½	—	1445	1245	1625	1140	105
TRS - - 11.88	ITS - - 11.88	2	Specify	11½	1⅜	4-10d	2-10d	—	1550	1365	1780	1150	105
TRS - - 14	ITS - - 14	2	Specify	14	1⅜	4-10d	2-16d	—	1785	1735	1905	1230	105
TRS - - 16	ITS - - 16	2	Specify	16	1⅜	4-10d	4-10d	4-10d x 1½	1960	1595	1885	1230	615
						4-16d	4-16d	4-10d x 1½	1960	1735	1905	1230	615
						4-10d	4-10d	4-10d x 1½	1960	1595	1885	1230	615
						4-16d	4-16d	4-10d x 1½	1960	1735	1905	1240	615

KC® STK NO	CARRYING MEMBER	NAIL SCHEDULE		DESIGN LOAD	UPLIFT LBS 133%
		HEADER	JOIST		
TRS (ITS)	2x Nailer	6-10d x 1½	—	1260	105
	2x Nailer	6-10d x 1½	2-10d x 1½	1260	310
	2-2x Nailer	6-10d	—	1260	105
	2-2x Nailer	8-10d	4-10d x 1½	1745	615
	3x Nailer	6-16d x 2½	—	1500	105
	3x Nailer	8-16d x 2½	4-10d x 1½	1540	615
	4x Nailer	6-16d	—	1525	105
	4x Nailer	8-16d	4-10d x 1½	1925	615



TR — TOP MOUNT HANGERS (Light/Top Flange)

TR TOP MOUNT HANGERS

Design Features . . . the TR series hangers are used primarily for residential purposes . . . they are economical hangers designed especially for the smaller wood I-joist sizes and are used for light wood I-joist loading. They also provide economical production framing with potential additional savings when the hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flanges for accurate header connection; guarantee uniformity and high quality. Top flange design provides automatic self-jigging.

Wood I-Joist Sizes

- 2 series (2x) - W = $1\frac{1}{16}$ "
- 25 series - W = $1\frac{3}{16}$ "
- 2.06 series W = $2\frac{1}{16}$ "
- 35 series - W = $2\frac{3}{8}$ "
- 3 series (3x) - W = $2\frac{5}{16}$ "
- 4 series (4x) - W = $3\frac{3}{16}$ "

Material . . . 2" section – 18 ga. galvanized steel.

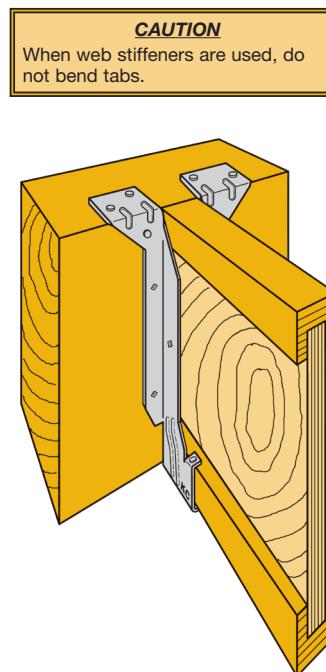
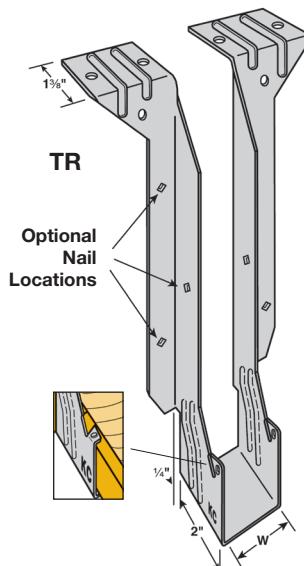
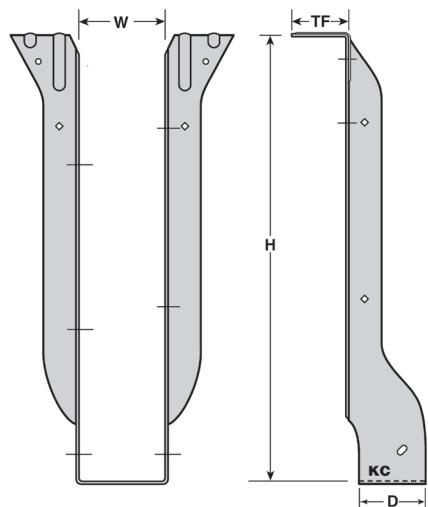
Nails . . . requires only 6 or 8 nails to install, compared to the old style hangers which are very labor intensive.

Note . . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

IMPORTANT

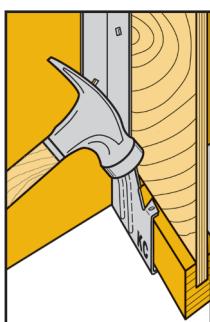
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

Typical Detailing for the TR, MTR and HTR Hangers



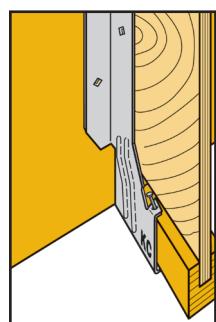
CAUTION
When web stiffeners are used, do not bend tabs.

TR Installation Sequence



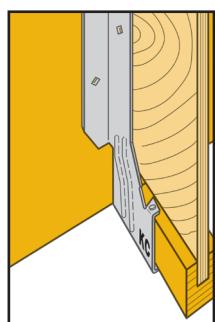
Step 1

With a hammer, bend the tab.



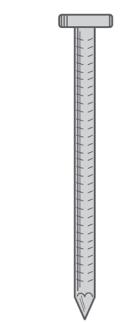
Step 2

To prevent the wood from splitting, hammer the nail in at an angle.



Step 3

The tab is correctly installed now.



Use a
10d x 1 1/2" nail.

Typical TR Installation

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
TR2 9.5	ITT29.5	2	$1\frac{1}{16}$	9 1/2	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR211.88	ITT211.88	2	$1\frac{1}{16}$	11 1/8	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR259.5	ITT9	2	$1\frac{13}{16}$	9 1/2	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR2511.88	ITT11	2	$1\frac{13}{16}$	11 1/8	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR2514	ITT14	2	$1\frac{13}{16}$	14	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR2516	ITT16	2	$1\frac{13}{16}$	16	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR - 10	ITT - 10	2	Specify	Specify	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR - 12	ITT - 12	2	Specify	Specify	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR - 14	ITT - 14	2	Specify	Specify	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245
TR - 16	ITT - 16	2	Specify	Specify	1 1/8	6-10d	2-10d x 1 1/2	1695	1695	245

ALTERNATE NAILING SCHEDULE

KC® STK NO	CARRYING MEMBER	NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS 133%
		TOP FLANGE	FACE	JOIST	NORMAL LBS	MAX LBS	
TR (ITT)	2x Nailer	4-10d x 1 1/2	2-10d x 1 1/2	2-10d x 1 1/2	1200	1200	245
	3x Nailer	4-16d x 2 1/2	2-16d x 2 1/2	2-10d x 1 1/2	1600	1600	245
	2-2x Nailer	4-10d	2-10d	2-10d x 1 1/2	1200	1200	245
	4x Nailer	4-10d	2-10d	2-10d x 1 1/2	1695	1695	245
	2x Ledger	4-10d x 1 1/2	4-10d x 1 1/2	4-10d x 1 1/2	1385	1385	485
	3x Ledger	4-16d x 2 1/2	4-16d x 2 1/2	4-10d x 1 1/2	1695	1695	485
	4x Ledger	4-10d	4-10d	4-10d x 1 1/2	1695	1695	485

Note: Web stiffeners required for more than 2-joist nails.

Step 1
With a hammer, bend the tab.

Step 2
To prevent the wood from splitting, hammer the nail in at an angle.

Step 3
The tab is correctly installed now.

Use a 10d x 1 1/2" nail.

MTR — MEDIUM TOP MOUNT HANGERS (Top Flange)

www.kcmetals.com

MTR MEDIUM TOP MOUNT HANGERS

Design Features . . the **MTR** series hangers are used for both residential and commercial purposes . . this series is fully die-formed for uniform high quality. The **MTR** hangers are especially used for mid-load and mid-height range (9½" – 20"). These hangers provide economical production framing with potential additional savings when the hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flange for accurate header connections. Top flange design provides automatic self-jigging.

Wood I-Joist Sizes	
25 series	W = 1½"
35 series	W = 2¾"
3 series (3x)	W = 2½"
4 series (4x)	W = 3½"

Material . . 2½" section – 16 ga. galvanized steel. **Nails** . . requires only 8 or 14 nails to install, compared to the old style hangers which are very labor intensive. For uplift requirement or different header requirements, see the alternate nailing table schedule.

Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

IMPORTANT

Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
MTR - - 9.5	MIT - - 9.5	2½	Specify	9½	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 11.88	MIT - - 11.88	2½	Specify	11¾	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 14	MIT - - 14	2½	Specify	14	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 16	MIT - - 16	2½	Specify	16	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 18	MIT - - 18	2½	Specify	18	2¼	6-16d	2-10d x 1½	2720	2720	245
MTR - - 20	MIT - - 20	2½	Specify	20	2¼	6-16d	2-10d x 1½	2720	2720	245

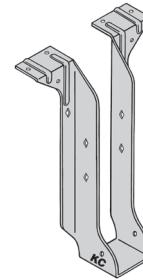
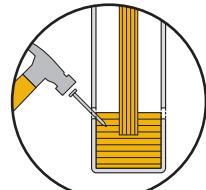
ALTERNATE NAILING SCHEDULE

KC® STK NO (REF NO)	CARRYING MEMBER	NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS 133%
		TOP FLANGE	FACE	JOIST	NORMAL LBS	MAX LBS	
MTR (MIT)	2x NAILER	4-10d x 1½	2-10d x 1½	2-10d x 1½	1685	1685	245
	3x NAILER	4-16d x 2½	2-10d x 2½	2-10d x 1½	2400	2400	245
	2-2x NAILER	4-10d	2-10d	2-10d x 1½	1685	1685	245
	4x NAILER	4-16d	2-16d	2-10d x 1½	2400	2400	245
	3x LEDGER	4-16d x 2½	4-16d x 2½	4-10d x 1½	2720	2720	485
	4x LEDGER	4-16d	4-16d	6-10d x 1½	2720	2720	720

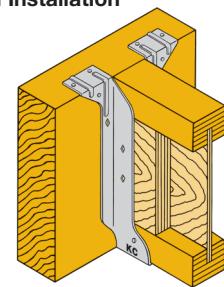
Note: Web stiffeners required for more than 2-joist nails.

MTR

Typical Installation



MTR
Diamond holes
in the joist flange
allow optional
nailing for uplift



HTR — HEAVY TOP MOUNT HANGERS (Top Flange)

HTR HEAVY TOP MOUNT HANGERS

Design Features . . the **HTR** series hangers are used primarily for commercial construction purposes . . this series is fully die-formed for uniform high quality. The **HTR** hangers are especially used for heavy-load and larger-height range (18" – 26"). These hangers provide economical production framing with potential additional savings when the hanger is pre-nailed onto carrying members. Positive control dies and prime quality galvanized steel ensure a perfectly flat 1-piece joist seat and 90° flange for accurate header connections. Top flange design provides automatic self-jigging.

WOOD I-JOIST SIZES	
35 series	W = 2¾"
3 series (3x)	W = 2½"
4 series (4x)	W = 3½"

Material . . 3" section – 16 ga. galvanized steel. **Nails** . . requires only 12 or 16 nails to install, compared to the old style hangers which are very labor intensive.

Special . . for uplift requirement or different header requirements, see the alternate nailing table schedule.

Uplift, add 2 – N9/10d x 1½ = 580 lbs

Uplift, add 4 – N9/10d x 1½ = 870 lbs

Note . . web stiffeners and backing blocks may be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

IMPORTANT

Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STOCK NO	REF NO	Dimensions (inches)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		D	W	H	TF	HEADER	JOIST	NORMAL LBS	MAX LBS	
HTR - - 18	HIT - - 18	3	Specify	18	2¾	10-16d	2-10d x 1½	3535	3535	245
HTR - - 20	HIT - - 20	3	Specify	20	2¾	10-16d	2-10d x 1½	3535	3535	245
HTR - - 22	HIT - - 22	3	Specify	22	2¾	10-16d	2-10d x 1½	3535	3535	245
HTR - - 24	HIT - - 24	3	Specify	24	2¾	10-16d	2-10d x 1½	3535	3535	245
HTR - - 26	HIT - - 26	3	Specify	26	2¾	10-16d	2-10d x 1½	3535	3535	245

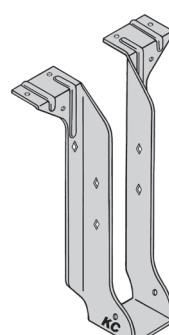
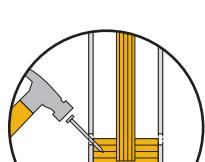
ALTERNATIVE NAILING SCHEDULE

KC® STOCK NO (REF NO)	CARRYING MEMBER	NAIL SCHEDULE			DESIGN LOAD		UPLIFT LBS 133%
		TOP FLANGE	FACE	JOIST	NORMAL LBS	MAX LBS	
HTR (HIT)	3x NAILER	4-16d x 2½	6-16d x 2½	2-10d x 1½	3000	3000	245
	2-2x NAILER	4-10d	6-10d	2-10d x 1½	2735	2735	245
	4x NAILER	4-16d	6-16d	2-10d x 1½	3200	3200	245
	4x LEDGER	4-16d	6-16d	4-10d x 1½	3535	3535	485
	4x LEDGER	4-16d	6-16d	6-10d x 1½	3535	3535	730

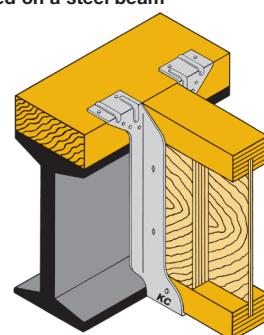
Note: Web stiffeners required for more than 2-joist nails.

HTR

Typical installation on 3x nailer mounted on a steel beam



HTR
Diamond holes
in the joist flange
allow optional
nailing for uplift



RS-TYPE JOIST HANGERS FOR WOOD I-JOIST

RSL
RS/
RSI
RSO/
RSOI
RSV

JOIST AND PURLIN HANGERS

Design Features . . . of the RS series provide the architect and builder with a wide variety of product sizes and load capacities in 14 ga., 12 ga. galvanized quality steel. This series is designed primarily for use in the panelized roof construction and the wood I-joist industry. One-piece design from positive control dies also incorporates easy access, full side flanges for added support. . increased bearing areas (**D** and **TF**) for greater load capacity. There are no elongated holes.

WOOD I-JOIST SIZED	
Single:	Double: (-2)
2 series (2x) W = 1½"	2 series (2x) W = 3½"
25 series W = 1½"	25 series W = 3½"
2.06 series W = 2½"	2.06 series W = 4½"
35 series W = 2½"	35 series W = 4½"
3 series (3x) W = 2½"	3 series (3x) W = 5½"
4 series (4x) W = 3½"	4 series (4x) W = 7½"

Material . . . 14 ga. and 12 ga. heavy -coated galvanized steel: Weldable, non-toxic hot roll sheet is available for steel fabricators.

RSL, RSV – 14 ga. galvanized steel.

RS, RSI, RSO and RSOI – 12 ga. galvanized steel

Installation . . . all models may be used on wood I-joist, glu-lam or headers. **RSL, RS, RSV** models only may be nailed upon standard wood plates and nailers which are securely installed over metal, masonry, or concrete. **RSO** models require wood beams or other supports that provide full-face nailing surfaces. The **RS** series requires the following minimum fillet welds to each tab: 12 ga., $\frac{1}{8}$ " x 2". All models may be used for weld-on applications. Welding eliminates all top and face nailing requirements. Verify with the manufacturer when nails may be installed parallel to the glue line. The header may not be able to receive the necessary nails, as required by the specific hanger. Each ledger application must be evaluated for top flange dimensions, nail length and nail placement.

Design Dimensions . . . **H** is designed to account for full wood I-joist heights. Specify if special **H** dimensions are required. **W** dimensions listed are for standard wood I-joist size widths as noted. **W** dimensions will be slightly oversized to facilitate erection. Specify if **W** dimensions are required.

Loads . . . average ultimate load values are calculated from independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three.

Special . . . web stiffeners are required on all wood I-joist shown in this table.

Uplift Values . . . are the result of extensive testing programs conducted in conformity with criteria set forth by the ICC.

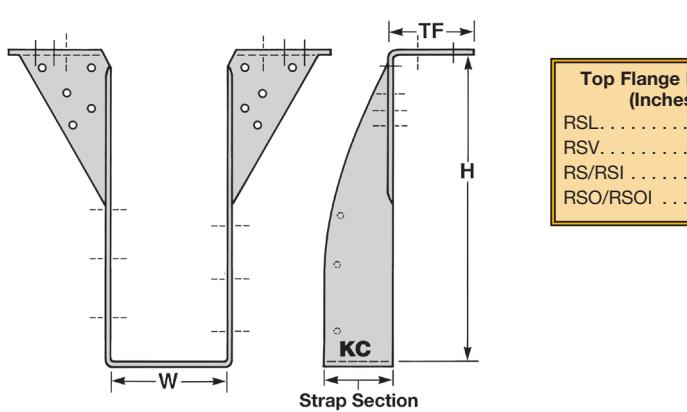
Welding . . . on saddle hangers is done by **KC® Metals**' certified welders.

Saddle Hangers . . . are available and made to the engineer's specifications. They may be used for most conditions except at end wall and are especially recommended for nailer (sleeper) applications. Specify **S** dimensions as well as **W** and **H** dimensions.

Skewed Hangers . . . (see page 43) are available in the **RS** series. See the **R** series for skewed requirements.

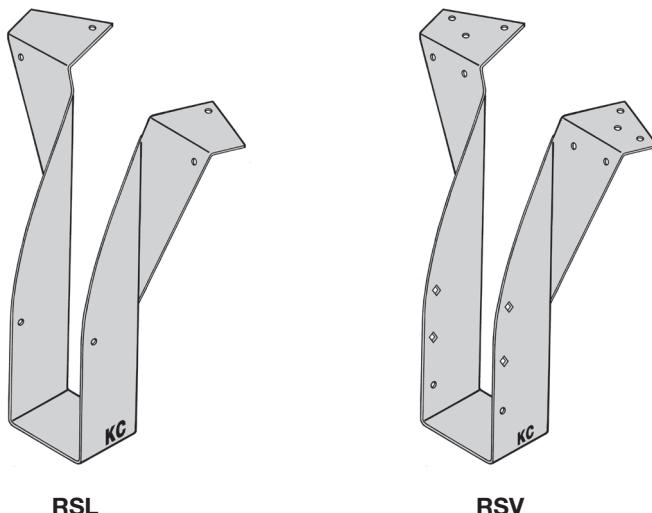
Sloped Hangers . . . are available . . . specify angle or whether sloped up or down. Due to the infinite variety of custom orders, sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

Note . . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.



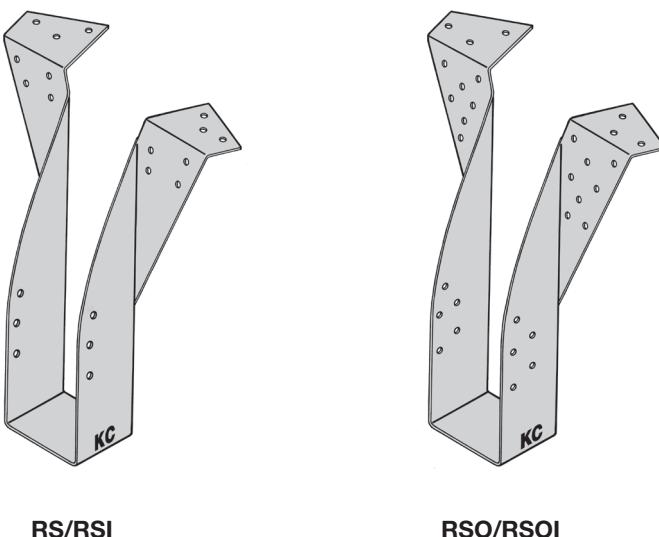
Top Flange Length (Inches)

RSL	1½
RSV	2½
RS/RSI	2½
RSO/RSOI	3



RSL

RSV



RS/RSI

RSO/RSOI

IMPORTANT

Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

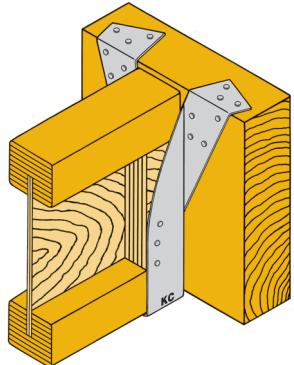
RS-TYPE JOIST HANGERS FOR WOOD I-JOIST

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KC® STK NO	REF NO	NAIL SCHEDULE			DESIGN LOAD (LBS)					UPLIFT LBS	
		HEADER			HEADER TYPE						
		TOP	FACE	JOIST ¹	LVL	PSL	LSL	DF/SP	SPF		
RSL	—	2-10d x 1½	4-10d x 1½	2-10d x 1½	2175	2175	2175	2175	1415	265	
		2-10d	4-10d	2-10d x 1½	2745	2745	2745	2745	—	265	
		2-16d	4-16d	2-10d x 1½	3265	3200	3200	3265	3200	265	
		4-10d x 1½	4-10d x 1½	4-10d x 1½	2175	2175	2175	2175	1415	530	
		4-10d	4-10d	4-10d x 1½	2745	2745	2745	2745	—	530	
		4-16d	4-16d	4-10d x 1½	3265	3265	3265	3265	—	530	
RSV (Min)	LBV (Min)	6-10d x 1½	4-10d x 1½	2-10d x 1½	2305	2305	2305	2305	1510	265	
		6-10d	4-10d	2-10d x 1½	2305	2700	1700	2700	2305	—	
		6-16d	4-16d	2-10d x 1½	3265	3265	3265	3265	—	265	
RSV (Max)	LBV (Max)	6-10d x 1½	4-10d x 1½	6-10d x 1½	2305	2305	2305	2305	1510	530	
		6-10d	4-10d	6-10d x 1½	2305	2700	2700	2700	2305	—	
		6-16d	4-16d	6-10d x 1½	3265	3265	3265	3265	—	770	
RS RSI	B	6-10d	8-10d	6-10d x 1½	3620	3025	3865	3865	2550	—	
		6-16d	8-16d	6-16d x 2½	4200	3515	4550	4105	3000	—	
RSO/RSOI	HB	6-16d	16-16d	10-16d x 2½	5905	4945	6735	6105	4000	—	
										2140	

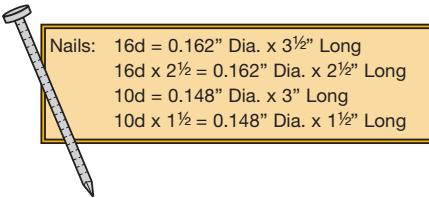
RSL
RS/RSI
RSO/RSOI
RSV



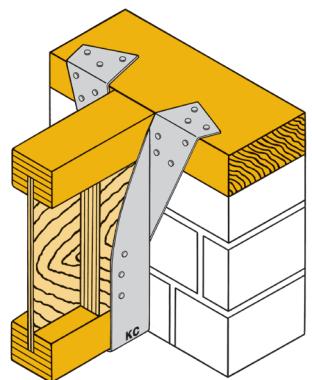
RS
Typical Installation
Wood I-Joist to
Wood Header

the **ONLY APPROVED EQUAL™**

STRAP SECTION	HANGER TYPE
	KC® STK NO
2"	RSL 35/RSL 35-2
	RSL 3x/RSL 3x -2
	RSL 2x-2
	RSL 4x
	RSL 25-2
	RSL 4.12
2½"	RSL 5.31
	RSV/RS 35/RS-2
	RSV/RSI 3x/RSI 3x-2
	RSV/RS 2.68
	RSV/RS 2x-2
	RSV/RSI 4x/RSI 4x-2
	RSV/RS 5.31
3"	RSV/RS 5.50
	RS 35/RS 35-2
	RSI 3x/RSI 3x-2
	RS 2.68
	RS 2x-2
	RSI 4x/RSI 4x-2
	RS 5.31
3½"	RS 5.50
	RSV 2x
	RS 2x
	RSV 1.68
	RS 25
4"	RSV 25
	RSO 35/RSO 35-2
	RSOI 3x/RSOI 3x-2
	RSOI 4x/RSOI 4x-2
	RSO 5.50

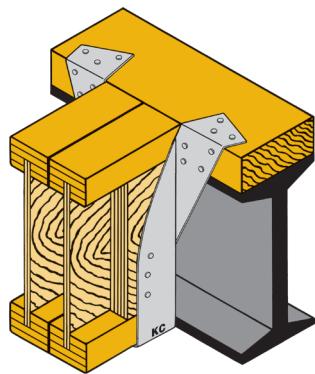


Nails:
16d = 0.162" Dia. x 3½" Long
16d x 2½ = 0.162" Dia. x 2½" Long
10d = 0.148" Dia. x 3" Long
10d x 1½ = 0.148" Dia. x 1½" Long



RS
Typical Installation
Wood I-Joist to
Wood Nailer on
Masonry Wall

ALTERNATE NAILING SCHEDULE				
KC® STK NO	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)
		WOOD NAILER	HEADER	
RSL	—	2x	6-10d x 1½	2175
		2-2x	6-10d	2175
		3x	6-16d x 2½	3000
		4x	6-16d	3265
RSV	LBV	2x	10-10d x 1½	2305
		2-2x	10-10d	2305
		3x	10-16d x 2½	2700
		4x	10-16d	2700
RS/RSI	B	2-2x	14-10d	3865
		3x	14-16d x 2½	3865
		4x	14-16d	3865
RSO/RSOI	HB	4x	22-16d	5905



RS
Typical Installation
Wood I-Joist (Double) to
Wood Nailer on
Steel "I"-Beam

WELD-TYPE JOIST HANGERS FOR WOOD I-JOIST

R/RI ROOF STRUCTURE

RA/RAI JOIST AND PURFLIN HANGERS

Design Features . . of the R series offer a wide application flexibility, particularly to the panelized construction and wood I-joist industry, including seven different versions:

- RHU** (1) Standard versions (5) Top Flange Down versions
- (2) Saddle versions (6) Top Flange Open/Closed versions
- (3) Offset versions (7) Seat Sloped versions
- (4) Skewed versions

Additional design features provide easier, faster installation, greater load capacities and strength:

- Superior flange design
- Higher load values
- Stirrup design fully maximizes metal surface area where it is vital to construction needs
- Uplift nailing on special order

WOOD I-JOIST SIZED

Single:	Double: (-2)
2 series (2x) W = 1 $\frac{1}{16}$ "	2 series (2x) W = 3 $\frac{1}{16}$ "
25 series W = 1 $\frac{1}{8}$ "	25 series W = 3 $\frac{1}{8}$ "
2.06 series W = 2 $\frac{1}{16}$ "	2.06 series W = 4 $\frac{1}{16}$ "
35 series W = 2 $\frac{3}{8}$ "	35 series W = 4 $\frac{1}{8}$ "
3 series (3x) W = 2 $\frac{1}{16}$ "	3 series (3x) W = 5 $\frac{1}{8}$ "
4 series (4x) W = 3 $\frac{1}{16}$ "	4 series (4x) W = 7 $\frac{1}{8}$ "

Material . . 12 ga., $\frac{3}{16}$ " and $\frac{1}{4}$ " prime quality steel.

R/RI and RA/RAI: 12 ga. and $\frac{3}{16}$ " steel.

RH and RHI: 12 ga. and $\frac{3}{16}$ " and $\frac{1}{4}$ " steel.

Nails . . see table.

Loads . . tested load values are from independent laboratory tests® conducted in accordance with code criteria, with a minimum safety factor of three.

Finish . . KC® SUPERSPEED® paint.

Design Dimensions . . H is sized for wood I-joist heights.

Ordering/Specifying Information:

Saddle . . add S to stock no. and width of supporting beams.

(Example: RI410x S = 5 $\frac{1}{4}$)

Offset Top Flange . . add OS to stock no. and direction of offset left or right.

(Example: RI 410x, R = Right, L = Left)

Skewed . . add SK to stock no. and direction and degree of skew.

(Example: RI410X SKL 30°, R = Right, L = Left)

Top Flange Down . . add TFD to stock no. and direction and angle.

(Example: RI 410X TFDL 15°, R = Right, L = Left)

Top Flange Open . . add TF to stock no. and degree.

(Example: RI410x TFO 20°, O = Open, C = Closed)

Seat Sloped . . add SL to stock no. and direction of slope (up or down).

(Example: RI410x SLD15°, D = Down, U = Up)

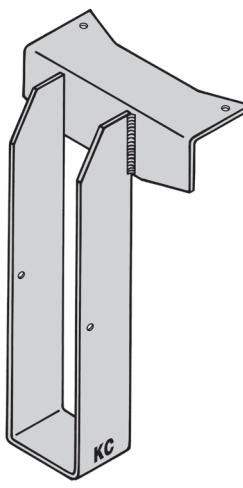
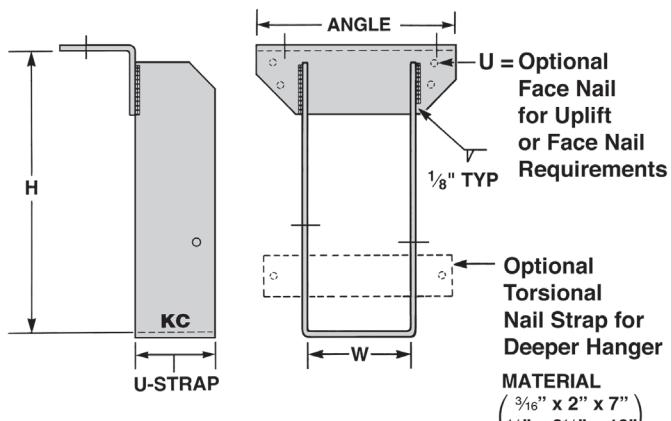
Any of the above are available in a combination hanger.

(Example: RI410 Offset right, skewed 45° left, sloped down 20° pitch)

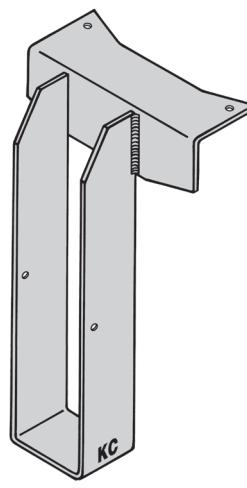
RI410x OSR/SKL 45°/SLD 20°

Skewed and Sloped Hangers . . (see page 43) are available, specify angle and whether left or right, up or down. Due to the infinite variety of custom orders, sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

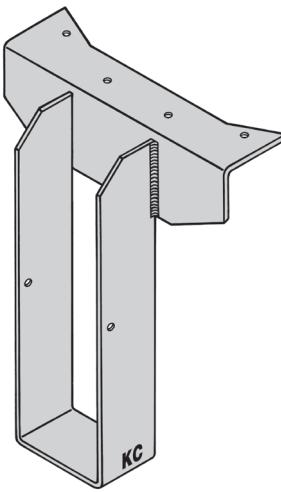
Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each. Laminated ledgers must be properly evaluated by the designer. A solid wall backing and ledgers at least 3x must be used to attain load values. Hangers used to support multi-ply joist; the joist must be fastened together to act as a single member before installation into the hanger.



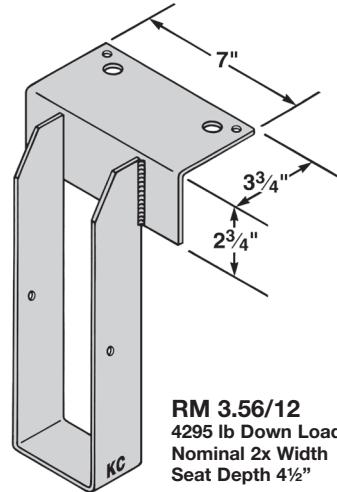
R/RI



RA/RAI



RH/RHI



RM 3.56/12
4295 lb Down Load
Nominal 2x Width
Seat Depth 4 1/2"

IMPORTANT
Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Load Product catalog of the engineered wood I-joist manufacturer).

WELD-TYPE JOIST HANGERS FOR WOOD I-JOIST

For Product Substitutions . . . the ONLY APPROVED EQUAL™

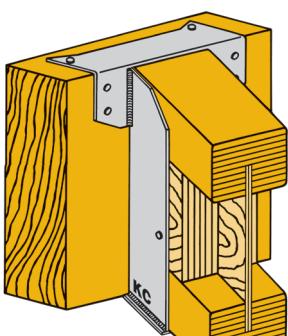
KC® STK NO	REF NO	JOIST SIZES		NAIL SCHEDULE			DESIGN LOAD (LBS)			UPLIFT LBS	
		WIDTH	DEPTH	TOP	FACE	JOIST	LVL	PSL	LSL		
R/RI	W/WI	1½ to 7½	3½ to 30	2-10d x 1½	—	2-10d x 1½	1775	1775	1775	1775	—
		1½ to 7½	3½ to 30	2-10d	—	2-10d x 1½	2365	2100	2100	2365	—
		1½ to 7½	3½ to 30	2-16d	—	2-10d x 1½	2365	2365	2365	2365	—
RM	WM	1½ to 7½	3½ to 30	2-16d x DPLX	—	2-10d x 1½	—	—	—	—	—
RMU	WMU	1½ to 7½	9 to 18	2-16d x DPLX	4-¼ x 1" Masonry	6-10d x 1½	—	—	—	—	700
		1½ to 7½	18½ to 22½	2-16d x DPLX	4-¼ x 1" Masonry	6-10d x 1½	—	—	—	—	700
		1½ to 7½	23 to 28	2-16d x DPLX	4-¼ x 1" Masonry	6-10d x 1½	—	—	—	—	650
RA/RAI	WP/WPI	1½ to 7½	3½ to 30	2-10d x 1½	—	2-10d x 1½	2880	2880	—	2880	—
		1½ to 7½	3½ to 30	2-10d	—	2-10d x 1½	3270	3270	3270	3270	—
		1½ to 7½	3½ to 30	2-16d	—	2-10d x 1½	4045	4045	4045	4045	—
RAU	WPU	1¾ to 5½	7¼ to 18	2-16d	4-16d	6-10d x 1½	4730	4730	4215	4215	775
		1¾ to 5½	13½ to 22½	2-16d	4-16d	6-10d x 1½	4730	4730	4215	4215	650
		1¾ to 5½	23 to 28	2-16d	4-16d	8-10d x 1½	4730	4730	4215	4215	800
RH/RHI	HW/HWI	1½ to 7½	3½ to 32	4-10d	—	2-10d x 1½	4555	4555	4555	5195	—
		1½ to 7½	9 to 18	4-16d	—	2-10d x 1½	5320	5320	5320	5320	—
		1¾ to 3½	7¼ to 18	4-16d	4-16d	6-10d x 1½	6470	5636	5630	6470	775
RHU	HWU	1¾ to 3½	18½ to 22½	4-16d	4-16d	6-10d x 1½	6470	5636	5630	6470	775
		1¾ to 3½	23 to 28	4-16d	4-16d	8-10d x 1½	6470	5636	5630	6470	1020
		1¾ to 3½	28½ to 32	4-16d	4-16d	8-10d x 1½	6470	5636	5630	6470	1020
4¾ to 7½	7¼ to 18	4-16d	4-16d	6-10d x 1½	6035	5636	5630	6085	775	—	
		4¾ to 7½	18½ to 22½	4-16d	4-16d	6-10d x 1½	6035	5636	5630	6085	775
		4¾ to 7½	23 to 28	4-16d	4-16d	8-10d x 1½	6035	5636	5630	6085	1020
4¾ to 7½	28½ to 32	4-16d	4-16d	8-10d x 1½	6035	5636	5630	6085	1020	—	

"U" STRAP SECTION	KC® STK NO
R 2x / RA 2x-2 / RM 2x -2	
R 25	
R 35 / RA 35 / RA 35-2 / RH 35-2 / RM 35-2	
RI 3x / RAI 3x / RAI 3x-2 / RHI 3x-2	
RM 3.56	
RI 4x / RAI 4x / RAI 4x-2 / RHI 4x / RHI 4x-2 / RMI 4x-2	
RA 5.31 / RH 5.31	
RA 5.50 / RH 5.50 / RM 5.50	
RA 25	
RM 35	
RM 3x	
RAU 3.56 / RHU 3.56	
RAU 5.50 / RHU 5.50	
RAU 5.62	
RHU 7.12	
RA 2x / RH 2x-2	
RAU 25 / RM 25	
RAU 2.75	
RH 35	
RHI 3x	

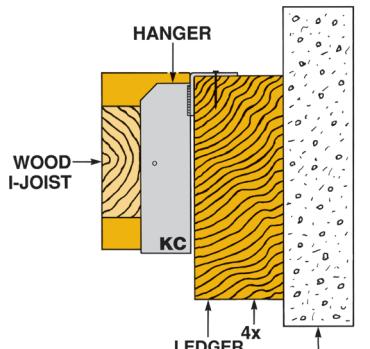
KC® STK NO	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)		UPLIFT LBS
		WOOD NAILER	HEADER (TOP FLANGE)	HEADER TYPE	DF/SP	
R/RI	W	2X	2-10d x 1½	1600	1600	—
		3X	2-16d x 2½	1890	1890	—
		2-2X	2-10d	1775	1775	—
		4X	2-10d	2200	2200	—
RA/RAI	WP	2X	2-10d x 1½	2530	2500	—
		3X	2-16d x 2½	3005	2520	—
		2-2X	2-10d	3260	3255	—
		4X	2-10d	3270	3255	—
RAU/RAIU	WPU	3X	8-16d x 2½	3000	2520	775
		2-2X	8-10d	3270	3270	700
RH/RHI	HW	4X	4-16d	5320		
		2-2X	8-16d x 2½	5650		700

KC® STK NO	ANGLE
R/RI =	2¼" x 2¼" x 12 ga x 6½"
RA/RAI =	2¼" x 2¼" x 7 ga x 7"
RH/RHI =	2½" x 3½" x ¼" x 10"

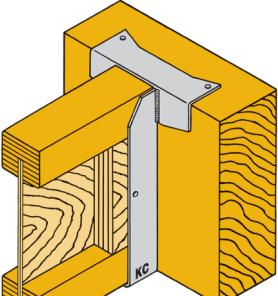
* When width is greater than 6½", length of angle is 8"



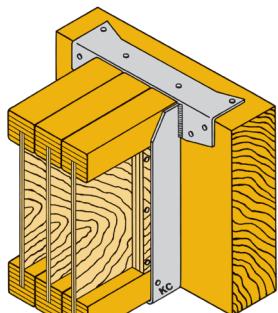
R
Typically Installed, Sloped
Down and Skewed Left
(Welded)



RH
Typical Ledger Installation



RI410
Typical Installation



RA2514-2
Typical Installation
(Double)



RH2514-3
Typical Installation
(Triple)

U-TYPE UNIVERSAL JOIST HANGERS FOR WOOD I-JOIST

SI
MUI

JOIST HANGERS

Design Features . . constant dimensional accuracy and precision controlled 90° angles ensure proper wood I-joint bearing (flat seat) and header connection and alignment. This design reliability is the result of KC® Metal using positive-control dies, automated machinery, skilled operators and prime quality galvanized steel. Two design styles are available for application and load bearing flexibility.

Stock No. Design Configuration

S/SI() Standard

MUI Standard

MUI()R Reversed face flange (turned in) for 2 $\frac{1}{16}$ " NET and larger joist sizes

Wood I-Joist Sizes	
Single:	Double:
2 series (2x) W = 1 $\frac{1}{16}$ "	2 series (2x) W = 3 $\frac{1}{16}$ "
25 series W = 1 $\frac{13}{16}$ "	25 series W = 3 $\frac{9}{16}$ "
2.06 series W = 2 $\frac{1}{16}$ "	2.06 series W = 4 $\frac{1}{16}$ "
35 series W = 2 $\frac{3}{8}$ "	35 series W = 4 $\frac{13}{16}$ "
3 series (3x) W = 2 $\frac{3}{8}$ "	3 series (3x) W = 5 $\frac{1}{8}$ "
4 series (4x) W = 3 $\frac{3}{8}$ "	4 series (4x) W = 7 $\frac{1}{8}$ "

Material . . 18 ga. galvanized steel for **SI** joist hangers and 16 ga. galvanized steel for **MUI** joist hangers meets the specifications for schools and other public buildings.

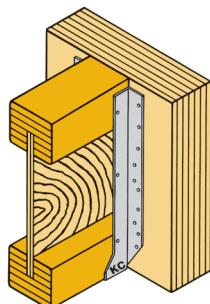
Loads . . nailing schedule and design load capabilities are consistent with those obtained in independent laboratory tests.

Design Features . . **MUI** hangers are designed for high loaded commercial wood I-joist applications without web stiffeners that are usually required. There are optional joist nails for a total uplift load of 940 lbs. using 1 $\frac{1}{2}$ " 10d nails.

Note . . web stiffeners and backing blocks may not always be required. Consult the engineered wood I-joist manufacturer for web stiffener and backing block requirements, and recommended nailing schedule for each.

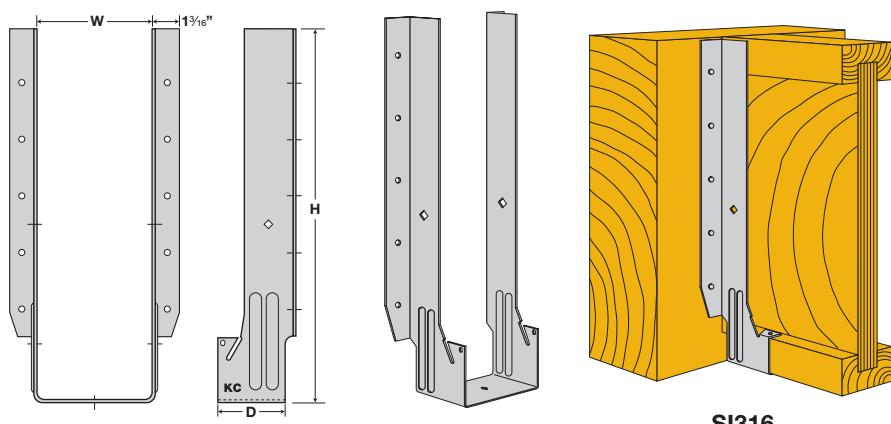
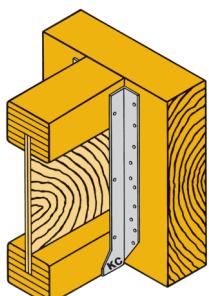
IMPORTANT

Design loads are for joist hangers. They are NOT wood I-joist load values (see the Design Product catalog of the engineered wood I-joist manufacturer)



MUI416

Onto Laminated Veneer Lumber (LVL)
or Dimensional Lumber



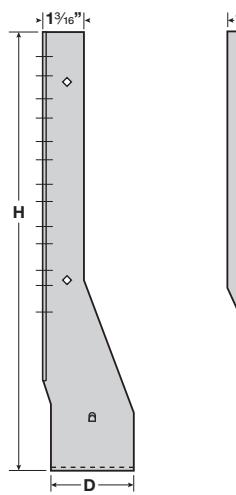
SI

SI

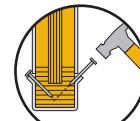
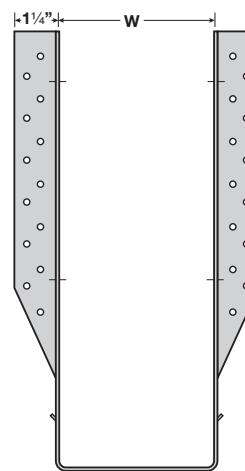
SI316



Bend tab into the bottom flange and fasten with 10d x 1 1/2" nails when web stiffeners are not used to help reduce floor squeaks.



MUI



Positive Angle Nailing

Angle Nailing Minimizes Wood Splitting of the Wood I-joist Flanges, While Permitting SUPERSPEED® Nailing from a Better Angle

For Product Substitutions . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS
		D	W	H	WOOD I-JOIST	HEADER	JOIST	NORMAL LBS	MAX LBS	
SI..9*	IUT..9	2	Specify	9	Specify	8-10d	2-10d x 1 1/2	890	1110	245
SI..10	IUT..10	2	Specify	9	Specify	8-10d	2-10d x 1 1/2	890	1110	245
SI..11*	IUT..11	2	Specify	11 $\frac{1}{8}$	Specify	10-10d	2-10d x 1 1/2	1110	1390	245
SI..12	IUT..12	2	Specify	11 $\frac{1}{8}$	Specify	10-10d	2-10d x 1 1/2	1110	1390	245
SI..14	IUT..14	2	Specify	13 $\frac{3}{4}$	Specify	14-10d	2-10d x 1 1/2	1555	1945	245
SI..16	IUT..16	2	Specify	15 $\frac{1}{4}$	Specify	16-10d	2-10d x 1 1/2	1775	2220	245
MUI..9	MIU..9	2 $\frac{1}{2}$	Specify	9	Specify	16-16d	2-10d x 1 1/2	2270	2840	245
MUI..11	MIU..11	2 $\frac{1}{2}$	Specify	11	Specify	20-16d	2-10d x 1 1/2	2880	3135	245
MUI..14	MIU..14	2 $\frac{1}{2}$	Specify	13 $\frac{1}{4}$	Specify	22-16d	2-10d x 1 1/2	3170	3550	245
MUI..16	MIU..16	2 $\frac{1}{2}$	Specify	15 $\frac{1}{4}$	Specify	24-16d	2-10d x 1 1/2	3455	3550	245
MUI..18	MIU..18	2 $\frac{1}{2}$	Specify	17 $\frac{1}{4}$	Specify	26-16d	2-10d x 1 1/2	3500	3550	245
MUI..20	MIU..20	2 $\frac{1}{2}$	Specify	19 $\frac{1}{2}$	Specify	28-16d	2-10d x 1 1/2	4030	4060	245

* 2 Series (2x) W = 1 $\frac{1}{16}$ " SI 2.9 SI 211
* 25 Series (2x) W = 1 $\frac{13}{16}$ " SI 25.9 SI 25/11
* 2.06 Series (2x) W = 2 $\frac{1}{16}$ " SI 2.06/9 SI 2.06/11

HEAVY-DUTY HANGERS (Double/Triple Wood I-Joists)

BHV

BEAM HANGERS

Design Features . . . seven versions to meet all specifications.

- (1) Standard versions (5) Top Flange Down versions
- (2) Saddle versions (6) Top Flange Open/Closed versions
- (3) Offset versions (7) Seat Sloped versions
- (4) Skewed versions

The top flange nails are placed to avoid damage to the laminated headers. Nailers and ledgers must be 4x or larger, or should be evaluated by the designer. All fasteners must be used to achieve load values; verify that the header can receive all fasteners.

WOOD I-JOIST SIZES	
Single:	Double:
2 series (2x) W = 1 1/8"	2 series (2x) W = 3 1/8"
25 series W = 1 13/16"	25 series W = 3 9/16"
35 series W = 2 2/8"	35 series W = 4 13/16"
3 series (3x) W = 2 2/8"	3 series (3x) W = 5 1/8"
4 series (4x) W = 3 3/8"	4 series (4x) W = 7 1/8"

Applications . . . BHV and BHSV heavy-duty hangers accommodate typical structural requirements for that extra heavy load . . . these hangers are used for longer spans which require greater loads that satisfy the safety factor for sound building requirements. For weld-on BHV applications, the minimum required weld is a $\frac{3}{16}$ " x $2\frac{1}{2}$ " fillet weld at each end of the header angle; BHSV requires a $\frac{1}{4}$ " x $2\frac{1}{2}$ " fillet weld at each end.

Nails . . . use 16d common nails.

Finish . . . KC® SUPERSPEED® gray paint.

Skewed and Sloped Hangers . . . available, specify angle (50° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering designs.

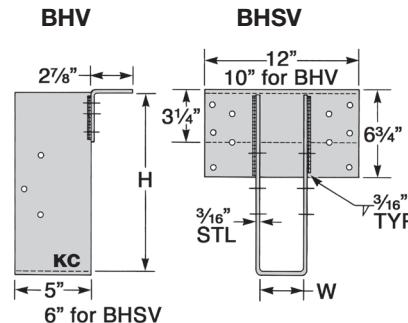
Options Available . . . The BHV and BHSV hangers can be sloped and/or skewed. See the R series for ordering requirements.

Note . . . web stiffeners are normally required for double joist installation. Consult the engineered wood I-joist manufacturer for web stiffener requirements and recommended nailing schedule.

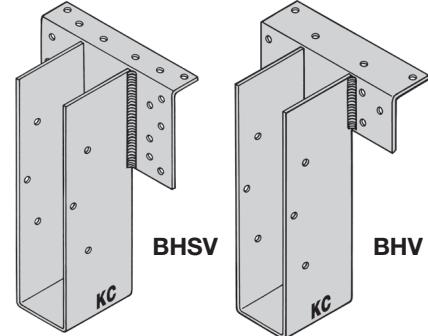
For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STOCK NO	REF NO	MATERIAL (INCHES)		DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD		UPLIFT LBS 133%
		ANGLE	U-STRAP	W	H	HEADER	JOIST	NORMAL LBS	MAX LBS	
BHV	GLTV	2 $\frac{1}{8}$ " x 3 $\frac{1}{8}$ " x 1/4" x 10	5 x 7 ga	Specify	Specify	10-16d	6-16d	7360	7360	1370
BHSV	HGLTV	2 $\frac{1}{8}$ " x 6 $\frac{1}{4}$ " x 1/4" x 12	6 x 7 ga	Specify	Specify	18-16d	6-16d	10780	10780	1370

BHV



BHSV



HBHQ HEAVY BEAM HANGERS (SCREW TYPE)

Design Features . . . The HBHQ is a high capacity screw type (KC® SUPERSPEED® SDS 1/4 Drive Screws). Top Flange Hanger designed for use with LVL and PSL engineered wood products. The SDS screws provide for a lower profile compared to standard through bolts.

Material . . . Stirrup 7 ga. steel
Top Flange 1/4" steel

Finish . . . KC® SUPERSPEED® gray paint.

Welding . . . is done by KC® Metals certified welders.

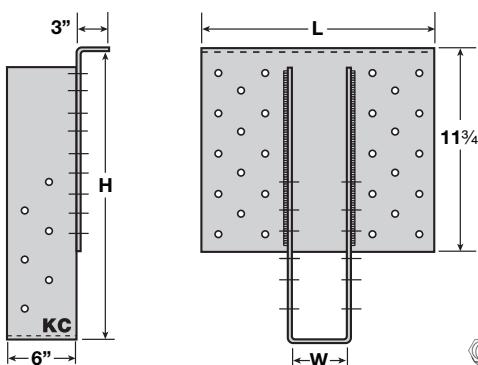
Specials . . . Available in standard width sizes and special height sizes. KC® SUPERSPEED® (1/4 x 3 SDS) Drive Screws are furnished for all holes in the HBHQ hanger.

Applications . . . all multiple hangers must be fastened together to act as one unit. Multiple header members may require additional fasteners at HBHQ header flange. Number and location of KC® SUPERSPEED® SDS1/4 drive screws to be the design responsibility of engineer of record.

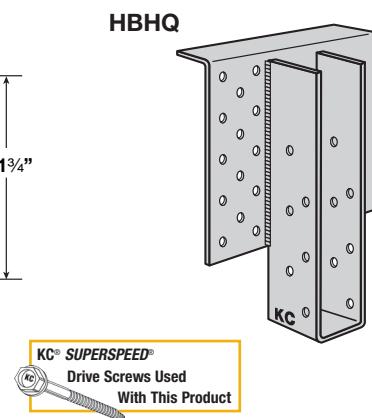
For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STOCK NO	REF NO	DIMENSIONS (INCHES)			KC® SUPERSPEED® SDS 1/4 DRIVE SCREWS		DESIGN LOAD HEADER TYPE			UPLIFT LBS 133%
		W	H 11" Min	L	CARRYING BEAM (HEADER)	SUPPORTED BEAM (PURLIN)	DF/WL LBS	PSL LBS		
HBHQ 3.62	EGQ3.62-SDS3	3 $\frac{1}{8}$	Specify	18	28-SDS $\frac{1}{4}$ -3	12-SDS $\frac{1}{4}$ -3	19800	18680	6365	
HBHQ 5.50	EGQ5.50-SDS3	5 $\frac{1}{2}$	Specify	18	28-SDS $\frac{1}{4}$ -3	12-SDS $\frac{1}{4}$ -3	19800	18680	6365	
HBHQ 7.25	EGQ7.25-SDS3	7 $\frac{1}{4}$	Specify	18	28-SDS $\frac{1}{4}$ -3	12-SDS $\frac{1}{4}$ -3	19800	18680	6365	

HBHQ



HBHQ



KC® SUPERSPEED® Drive Screws Used With This Product

STEEL STUD HARDWARE

SCREWS SCREWS

Design Features . . most structural hardware items can be converted for use with light gage steel construction. The hole patterns may differ slightly from those products manufactured for use in general wood construction. No.10 screws are general fasteners for steel construction. To achieve stated loads, shear capacity must be equal to or greater than the table value.

DESCRIPTION	FINISH	LOAD
#10 x 1" Hex	Zinc	330
#10 x 1" Philips	Zinc	330
#10 x 1½" Philips	Zinc	330

SCREWS

ST/CA ST/CAS

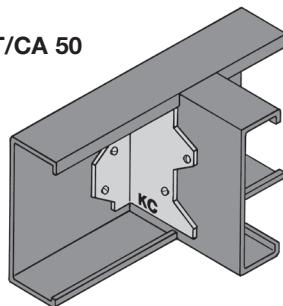
CLIP ANCHORS/SKEWED

Design Features . . the ST/CA and ST/CAS angles are multi-use reinforcing angles and can be field skewed to a maximum of 135°.

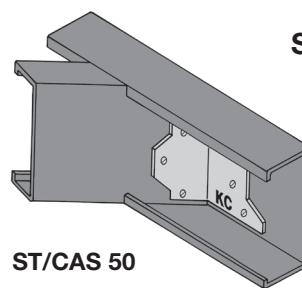
Material . . 18 ga. and 16 ga. galvanized steel.

Installation . . all specified fasteners must be used to achieve design loads.

ST/CA 50



ST/CA
ST/CAS



ST/WA ST/WAH14

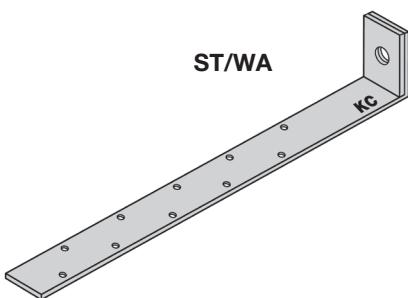
WALL ANCHORS

Design Features . . three wall anchor configurations are available for use in steel stud construction. The ST/WA and ST/WAM14 are suited for both retrofit and new construction.

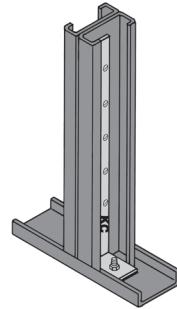
Material . . 14 ga. and 12 ga. galvanized steel.

Installation . . all specified fasteners must be used to achieve design loads.

ST/WA



ST/WA



ST/AD

ANCHOR DOWNS

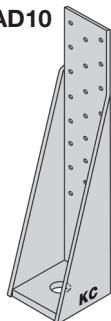
Design Features . . three configurations are available for easy steel stud installation. The narrow width accommodates inside dimensions of steel studs, while the lessened heights will not interfere with knockouts.

Material . . ST/AD8, 10 ga. body with ¾" base; ST/AD10, ST/AD15, 7 ga. with ½" base.

Installation . . all specified fasteners must be used to achieve design loads. The anchor bolt is 7/8" x (ST/AD8) and 1" x (ST/AD10 and ST/AD15). Length specified by the engineer.

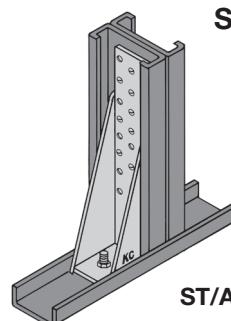
Finish . . KC® SUPERSPEED® gray paint.

ST/AD10



KC® STK NO	DIMENSIONS (INCHES)		SCREWS #10 TO STUD
	W	H	
ST/AD8	2½	13½	24
ST/AD10	2½	16½	30
ST/AD15	2¾	21½	48

ST/AD



ST/AD10

ST/AD ST/RS

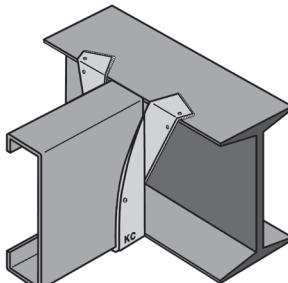
ROOF HANGERS

Design Features . . both the ST/R and ST/RS style hangers can be adapted for steel stud use. The ST/R hangers provide top and bottom channel support, while the RS hangers achieve required loads through seat-bearing.

Material . . ST/R, 12 ga. steel stirrup; ST/RS, 14 ga. and 12 ga. galvanized steel.

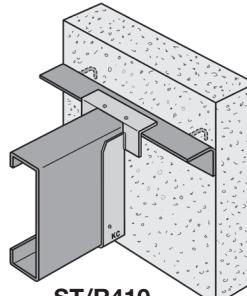
Installation . . both hanger styles can be welded to steel headers. The ST/R style can be sloped and/or skewed, while the ST/RS can be sloped as needed.

Finish . . KC® SUPERSPEED® gray paint.



ST/RS410

ST/R
ST/RS



ST/R410

NOTE

These items are a sampling of the product which can be converted for steel stud usage. Please contact factory for additional information.

SKEWED OR SLOPED JOIST HANGERS

www.kcmetals.com

**S
H
HTF**

STANDARD JOIST HANGERS

(Pages 8 and 38)

HEAVY JOIST HANGERS

(Pages 16 and 38)

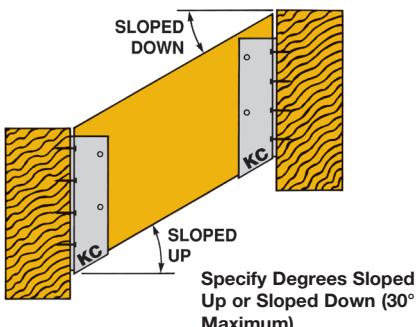
HEAVY TOP FLANGE JOIST HANGERS

(Page 18)

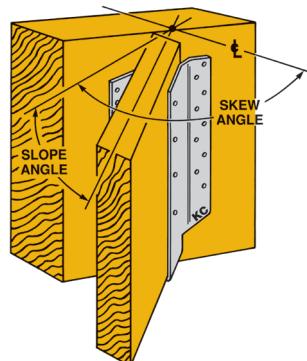
Design Features . . . skewed hangers, sloped hangers and combination skewed and sloped hangers are also manufactured from 1-piece prime galvanized steel (no welded parts).

LOAD DIRECTION	VARIATION	% OF DESIGN LOAD
Down	Skewed	100
Down	Sloped	100
Down	Combination	80
Uplift	*Skewed	75

*Greater than 15%



H210
Sloped Up/Sloped Down
(1-Piece Design)



H210
Skewed Left – Sloped Down
(1-Piece Formed Design)
No Welds

**R
RA
RH
RHG**

ROOF HANGERS

(Pages 22 and 23)

ROOF ANGLED HANGERS

(Pages 22 and 23)

ROOF HEAVY HANGERS

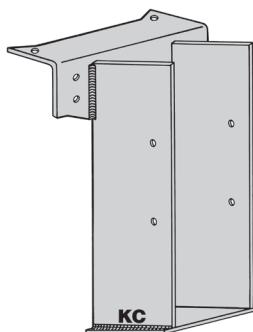
(Pages 22 and 23)

ROOF HEAVY GLU-LAM HANGERS

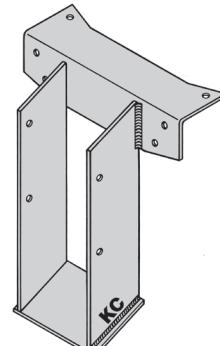
(Pages 22 and 23)

Design Features . . . the normal manufacturing technique for custom or modified R series hangers is a 3-piece welded design. The seat is welded to the two side flanges.

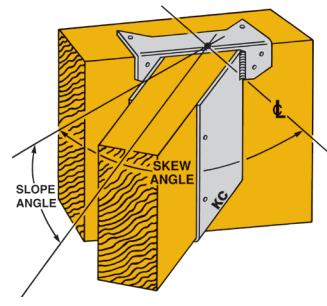
Load Direction	Variation	% of Design Load
Down	Skewed	100
Down	Sloped	100
Down	Combination	100
Down	Offset	50
Down	Ridge	100



RA412
Skewed Right
(Welded)



RA412
Sloped Down
(Welded)



RA412
Skewed Left – Sloped Down
(1-Piece "U" Strap Design
Welded to Top Flange Angle)

IMPORTANT

KC® Metal Products, Inc. can also provide 1-piece hangers for skewed, sloped and skewed and sloped combination hangers when appearance is important in exposed project construction.

**RS
RSO
RSH
RSG
RSGH**

ROOF STRUCTURE

(Pages 20 and 21)

ROOF STRUCTURE OREGON (UPLIFT)

(Pages 20 and 21)

ROOF STRUCTURE HEAVY

(Pages 20 and 21)

ROOF STRUCTURE GLU-LAM

(Pages 20 and 21)

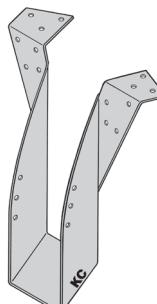
ROOF STRUCTURE

(Pages 20 and 21)

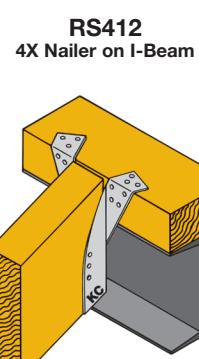
Design Features . . . the RS series hangers can only be sloped. For the skewed series, see the above R series.

Material . . . 1-piece galvanized or prime quality steel.

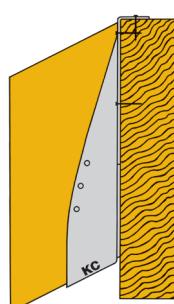
LOAD DIRECTION	VARIATION	% OF DESIGN LOAD
Down	Sloped 1° to 30°	100
Down	Sloped 31° to 45°	80



RS412
Sloped Down
(1-Piece Design)



RS412
4X Nailer on I-Beam



RS412
Sloped Down

KC® Metal Products, Inc. can manufacture almost any type of hanger for your needs. Just simply state:
(1) the type of hanger
(2) the size of the hanger
(3) the modifications) that is needed

Example: Heavy (H).
Example: 4 x 12 (H412).
Example: Modifications skewed (H412 skewed right 30°)
Modifications sloped down ½ pitch
(H412 skewed right 30°, sloped down ½ pitch).

For additional modified hanger types, ask for the KC® Metals' Technical Manual.



METALS PRODUCTS, INC.
SUPERSPEED® CONNECTORS

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STRUCTURAL HARDWARE SPECIALS

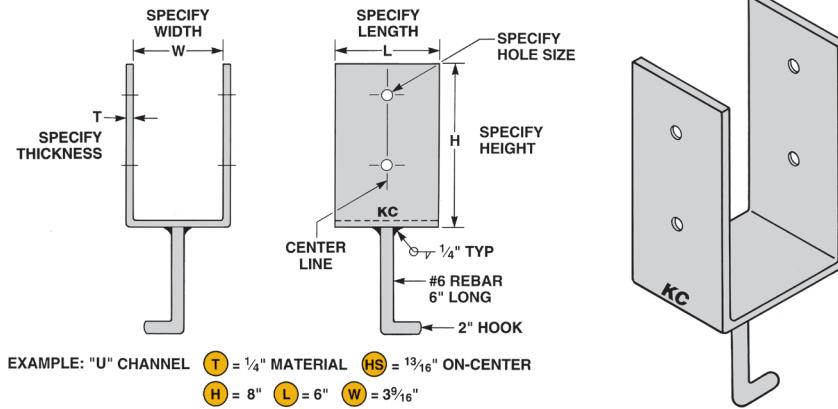
ORDERING INFORMATION

STANDARD HOLE SPACING

Bolt Size (Inches)	Edge Spacing (Inches)	Hole Size (Inches)	Location
1/2	1	9/16	2" O.C.
5/8	1 1/4	11/16	2 1/2" O.C.
3/4	1 1/2	13/16	3" O.C.
7/8	1 3/4	15/16	3 1/2" O.C.
1	2	1 1/16	4" O.C.
1 1/8	2 1/4	1 3/16	4 1/2" O.C.
1 1/4	2 1/2	1 5/16	5" O.C.
Note:		L = Length	
T = Thickness		H = Height	
W = Inside Width		HS = Hole Size	

Additional Ordering Information . . . the ornamental style hanger is available with any special item.

STRUCTURAL HARDWARE INFORMATION Ordering Information Dimensional Art



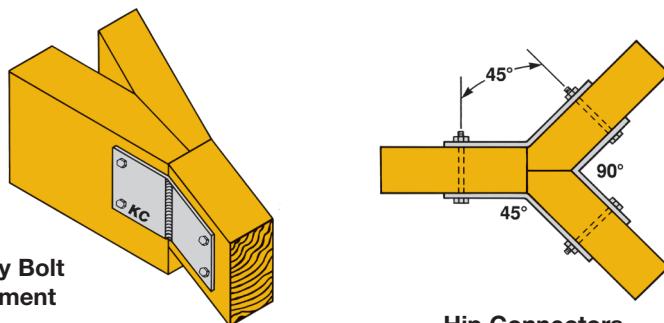
HIP HARDWARE

Design Features . . . used to make hip, rafter and ridge connections . . . precision made to the customer's specifications.

Material . . . specify.

Finish . . . KC® SUPERSPEED® gray paint.

Ordering Information . . . specify ridge and hip sizes. Provide slope in degrees or in pitch. Give hip/ridge connection in degrees. Provide a plan detail.



Specify Bolt Placement

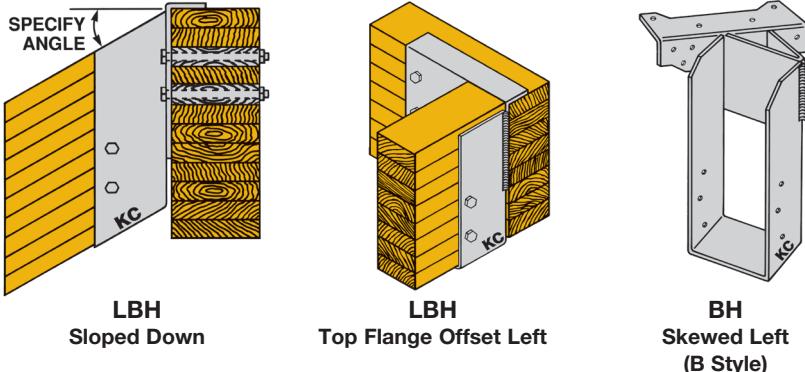
Hip Connectors

SKEWED, OFFSET OR SLOPED HARDWARE

Design Features . . . available in any combination or style (see page 43).

KC® STOCK NO	DIRECTION OF DOWN LOAD (LBS)		
	SLOPE	SKEW	*OFFSET
BH	6500	6550	60%
BHS	9165	10670	45%
LBH	9665	10000	6500
MBH	9665	10000	6500
HBH	9665	14250	6500

Note: *Offset load shown in % of standard, or in lbs.



LBH
Sloped Down

LBH
Top Flange Offset Left

BH
Skewed Left
(B Style)

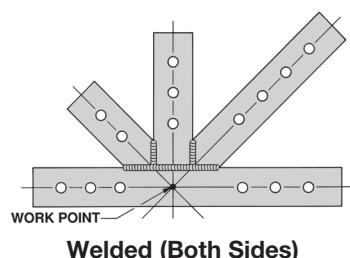
TRUSS HARDWARE

Design Features . . . available in either a 1-piece or welded design.

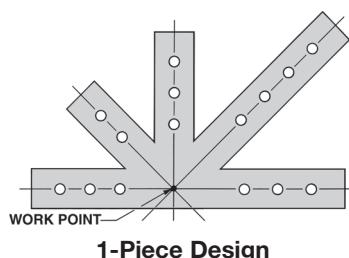
Ordering Information . . . a template must be supplied.



Horizontal Truss



Welded (Both Sides)



1-Piece Design

HANGER OPTIONS GENERAL NOTES

The following options and adjustments factors are applicable only on hangers manufactured by KC® Metal Products Inc.

Testing of modified hangers is done using the same basic criteria as is used for testing standard hangers submitted for ICC recognition. In some cases testing of all options available for a specific hanger simultaneous may not be possible. In these cases the option that produces the lowest allowable load is used to determine the adjustment factor required.

The supporting member (header) is always assumed fixed during actual installation. Horizontal forces resulting in sloped hanger geometry must be resisted by additional components in the structural system.

MATERIAL: The gage of steel used in the manufacture of modified hangers may vary from that specified for non-modified hangers depending on the manufacturing process. The number and location of fasteners may vary from non-modified hangers.

FINISH: Hangers which require welding, to accommodate various options will be painted after fabrication. Non-galvanized hangers may be hot-dipped galvanized after fabrication if specified at time of order; specify HDG.

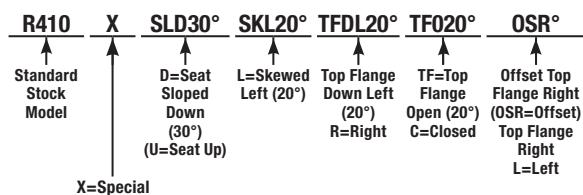
CODES: Due to the infinite number of variations possible, modified hangers do not have specific ICC recognition. The basic hanger is used with adjustments to allowable load where applicable.

ALLOWABLE LOADS: For multiple options existing on the same hanger, use the

adjustment factor that provides for the lowest allowable load.

INSTALLATIONS:

- 1) The number of fasteners provided for may be more than specified for non-modified hangers. All fasteners must be used to achieve allowable loads
- 2) For skewed type "A" hangers joist ends must be bevel-cut. For skewed type "B" hangers joist ends may be butt-cut.
- 3) Sloped seat top flange hangers must be backed.
- 4) Non-standard nails specified are provided with product.



KC® STOCK NO	SKEWED SEAT (MAXIMUM)	SLOPED SEAT (MAXIMUM)	SKEWED & SLOPED SEAT	SLOPED TOP FLANGE	OPEN TOP FLANGE	CLOSED TOP FLANGE	OFFSET TOP FLANGE	SADDLE HANGER	RIDGE HANGER	REVERSED OR CONCEALED FLANGE	UPLIFT	WELDABILITY	NON-BACKED (Backing reduces possible joist rotation)	BEVEL CUT JOIST	SQUARE (BUTT) CUT JOIST
BH/BHV	50°	45	•	•			•				•	•	•	•	
BHC											•	•		•	
BHS/BHSV	50°	45		•			•				•	•	•	•	
GH	45°							•							
H	67½°	45	•							•	•	•			•
HBH	45°	45													
HDT	45°	45	•								•				
HHDTP	45°													•	•
HSH	50°	45		•			•	•			•	•			
HTF	45°	45	•							•	•				•
HTP										•					•
HTPTF										•					
LBH	45°	45					•								
LSS	45°	45	•								•				•
MBH	45°	45						•							•
MBHG	45°														•
MSR/L	45°										•				•
R/R	84°	45	•	•	•	•	•	•	•		•	•	•	•	•
RA/R/RI	84°	45	•	•	•	•	•	•	•		•	•	•	•	•
RH/RHI	84°	45	•	•	•		•	•	•		•	•	•	•	•
RHU	45°	45	•								•				
RM/RMI	45°	45	•				•				•	•	•		
RS/RSI		45	•	•	•	•	•				•	•	•		•
RSG		45						•			•	•			•
RGH		45							•		•	•			•
RSH		45							•		•	•			•
RSL		45	•	•	•				•		•	•	•		•
RSO/RSOI		45	•						•		•	•	•		•
RU/RAU	45°	45	•								•				•
S	6½°	45	•								•				•
SH	50°	45	•	•			•	•			•	•			•
SSR/L	45°										•				•
TGH/TGHH	45°	45													•

HEAVY STRUCTURAL HARDWARE

BH **BHS** **LBH** **MBH** **HBH**

BEAM HANGERS

Design Features . . five versions to meet all specifications.

SERIES STEEL	MATERIALS	TOP FLANGE DIMENSIONS
	TOP FLANGE	STIRRUP
BH	$\frac{1}{4}$ " Steel	$\frac{3}{16}$ " x 5" Steel
BHS	$\frac{1}{4}$ " Steel	$\frac{3}{16}$ " x 5" Steel
LBH	$\frac{3}{16}$ " Steel	$\frac{3}{16}$ " x 8" Steel
MBH	$\frac{3}{16}$ " Steel	$\frac{3}{16}$ " x 6" Steel
HBH	$\frac{1}{4}$ " Steel	$\frac{3}{16}$ " x 6" Steel
		2 $\frac{1}{2}$ " x 18"

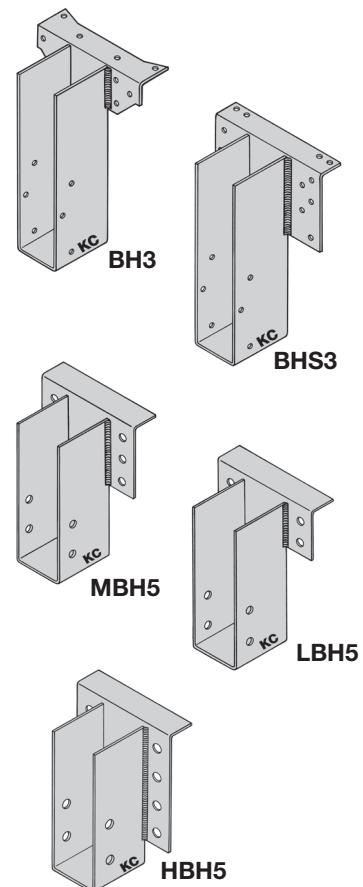
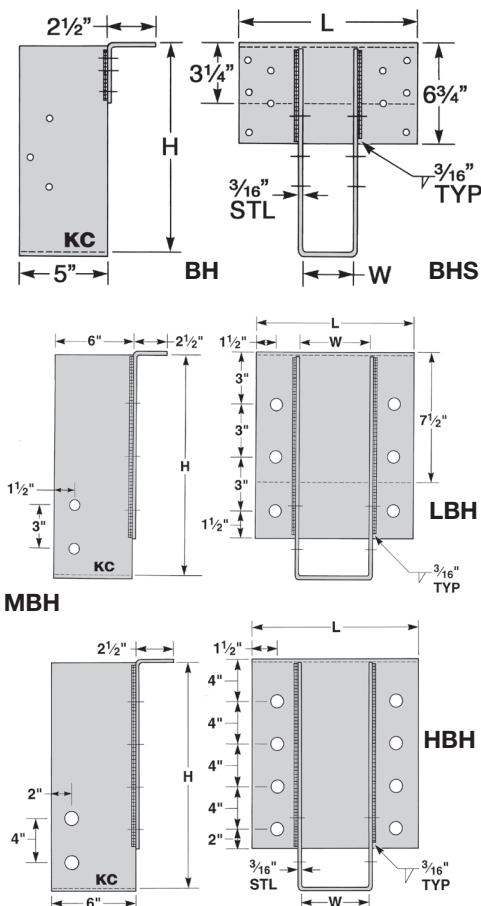
Applications . . **BH** and **BHS** heavy-duty hangers accommodate typical structural requirements for timber and glu-lam beams. Also available without top flange. **LBH**, **MBH** and **HBH** hangers accommodate heavy beam loads where the conditions will not permit a saddle hanger. These hangers are recommended for use in place of **BH** and **BHS** where **H** dimension exceeds 22".

Nails . . N25, furnished.

Finish . . KC® **SUPERSPEED**® gray paint.

Skewed and Sloped Hangers . . (see page 43) available, specify angle (50° max.) and whether left or right, up or down. Due to the infinite variety of custom orders, skewed hangers and sloped hangers are not code evaluated. Design loads of the nearest equivalent hanger should be used as a general guide, subject to specific engineering design.

Note . . all holes into "U" straps will have **N25** ($\frac{1}{4}$ " x 2 $\frac{1}{2}$ "), $\frac{3}{16}$ " machine bolts or 1" machine bolts in lower $\frac{1}{3}$ of the material section of the "U" strap.



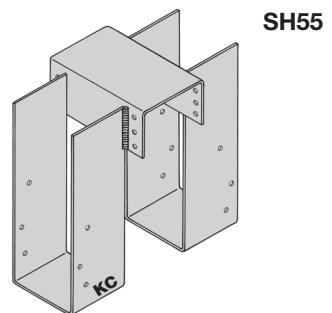
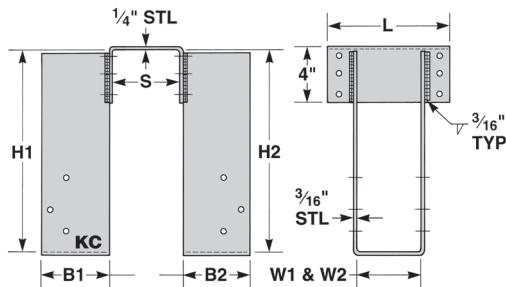
SH

SADDLE HANGERS

Design Features . . positive control dies and prime quality $\frac{1}{4}$ " and $\frac{3}{16}$ " steel meet structural requirements and provide added installation ease for glu-lam beams. Where **H** dimension exceeds 30", the **HSH** saddle hanger is recommended.

Nails . . N25, furnished.

Finish . . KC® **SUPERSPEED**® gray paint.



SHT

SADDLE HANGERS/SEISMIC TIES

Design Features . . tested and approved seismic tie provisions can be added to any **SH** or **HSH** as listed in the tables.

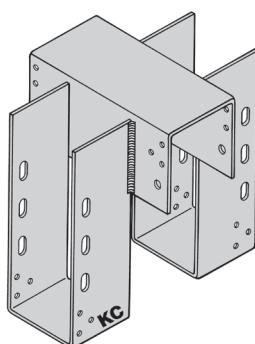
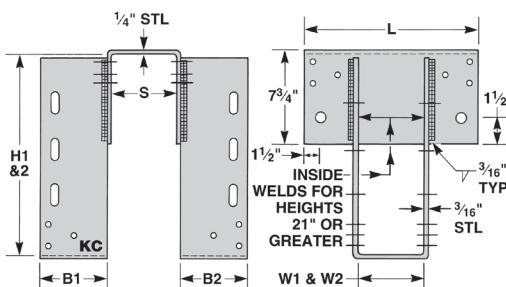
Nails . . N25, furnished.

Finish . . KC® **SUPERSPEED**® gray paint.

Note . . the $\frac{3}{16}$ " MB bolts should be located in the upper half of the $\frac{13}{16}$ " x 1 $\frac{1}{2}$ " slotted holes.

Ordering/Specifying Information . . SHT/HSHT: After selecting the model of **SH** or **HSH** as required for vertical loading requirements, simply change the designation to **SHT** or **HSHT** to obtain seismic tie model.

Special . . the "Min Depth H1 & H2" column in the load value table indicates the minimum height available in a standard configuration. If the required height is less than the minimum, tabs will be welded to each side of the bucket. The horizontally aligned slotted holes (similar to the **HHC3T** tabs) allow the required bolt installation.



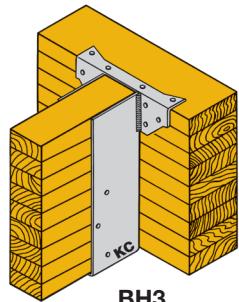
SHT55

HEAVY STRUCTURAL HARDWARE

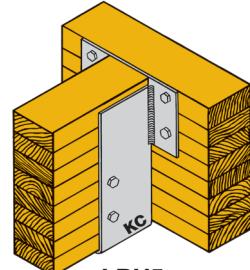
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For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

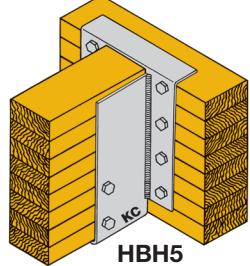
KC® STK NO	REF NO	DIMENSIONS (INCHES)			NAIL & BOLT SCHEDULE		DESIGN LOAD		
		W	H	L	CARRYING BEAM (HEADER)	SUPPORTED BEAM (PURLIN)	UPLIFT LBS	NORMAL LBS	MAX LBS
BH3	GLT3	3 1/4	Specify	10	10-N25	6-N25	1900	8020	8020
BH5	GLT5	5 1/4	Specify	10	10-N25	6-N25	1900	8500	8500
BH6	GLT6	5 1/2	Specify	10	10-N25	6-N25	1900	8500	8500
BH7	GLT7	6 7/8	Specify	12	10-N25	6-N25	1900	8580	9245
BH75	GLT75	7 1/2	Specify	12	10-N25	6-N25	1900	8580	9245
BHS3	HGLT3	3 1/4	Specify	12	16-N25	6-N25	1900	11590	11940
BHS5	HGLT5	5 1/4	Specify	12	16-N25	6-N25	1900	12750	12750
BHS7	HGLT7	6 7/8	Specify	12	16-N25	6-N25	1900	12750	12750
BHS9	HGLT9	8 7/8	Specify	14	16-N25	6-N25	1900	12750	12750
LBH3	LEG3	3 1/4	Specify	12	4-3/4 MB	2-3/4 x 5 MB	3250	13040	13865
LBH5	LEG5	5 1/4	Specify	12	4-3/4 MB	2-3/4 x 7 MB	4640	13040	13865
LBH7	LEG7	6 7/8	Specify	12	4-3/4 MB	2-3/4 x 9 MB	4640	13040	13865
MBH5	MEG5	5 1/4	Specify	12	6-3/4 MB	2-3/4 x 7 MB	4640	14835	16060
MBH7	MEG7	6 7/8	Specify	12	6-3/4 MB	2-3/4 x 9 MB	4640	14835	16060
HBH5	EG5	5 1/4	Specify	12	8-1 MB	2-1 x 7 MB	6145	18300	20580
HBH7	EG7	6 7/8	Specify	13 1/2	8-1 MB	2-1 x 9 MB	7625	19665	21945
HBH9	EG9	8 7/8	Specify	15 1/2	8-1 MB	2-1 x 11 MB	7625	21425	23705



BH3



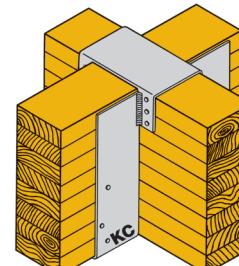
LBH5
(No Top Flange)



HBH5

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

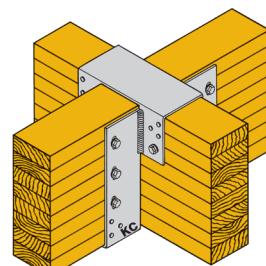
KC® STK NO	REF NO	W1 & W2	DIMENSIONS (INCHES)			H1 & H2	NAIL SCHEDULE		DESIGN LOAD EACH SIDE		UPLIFT EACH SIDE LBS
			S	L	B1 & B2		CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS	
SH35	GLS35	3 1/4	5 1/4	6	5 x 3/16 stl	Specify	12-N25	12-N25	9940	10235	1585
SH37	GLS37	3 1/4	6 7/8	6	5 x 3/16 stl	Specify	12-N25	12-N25	9940	10235	1585
SH39	GLS39	3 1/4	8 7/8	6	5 x 3/16 stl	Specify	12-N25	12-N25	9940	10235	1585
SH55	GLS55	5 1/4	5 1/4	9	5 x 3/16 stl	Specify	12-N25	12-N25	14410	14410	1585
SH57	GLS57	5 1/4	6 7/8	9	5 x 3/16 stl	Specify	12-N25	12-N25	14410	14410	1585
SH77	GLS77	6 7/8	6 7/8	12	5 x 3/16 stl	Specify	12-N25	12-N25	16835	16835	1585
SH79	GLS79	6 7/8	8 7/8	12	5 x 3/16 stl	Specify	12-N25	12-N25	16835	16835	1585



SH55

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	W1 & W2	DIMENSIONS (INCHES)			MIN DEPTH H1 & H2	H1 & H2	NAIL SCHEDULE		DESIGN LOAD EACH SIDE	
			S	L	B1 & B2			CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS
SHT35	GLST35	3 1/4	5 1/4	10 1/8	6 1/2 x 3/16 stl	9	Specify	12-N25	12-N25	12560	12860
SHT37	GLST37	3 1/4	6 7/8	10 1/8	6 1/2 x 3/16 stl	9	Specify	12-N25	12-N25	12560	12860
SHT39	GLST39	3 1/4	8 7/8	10 1/8	6 1/2 x 3/16 stl	9	Specify	12-N25	12-N25	12560	12860
SHT55	GLST55	5 1/4	5 1/4	12 1/8	6 1/2 x 3/16 stl	9	Specify	12-N25	12-N25	14410	14410
SHT57	GLST57	5 1/4	6 7/8	12 1/8	6 1/2 x 3/16 stl	9	Specify	12-N25	12-N25	14410	14410
SHT77	GLST77	6 7/8	6 7/8	13 3/4	6 1/2 x 3/16 stl	9	Specify	12-N25	12-N25	16835	16835

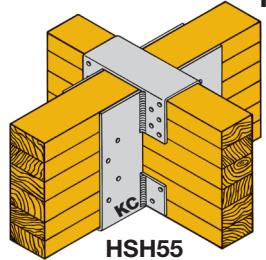


SHT55

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	W1 & W2	DIMENSIONS (INCHES)			MIN DEPTH H1 & H2	H1 & H2	NAIL SCHEDULE		DESIGN LOAD EACH SIDE	
			S	L	B1 & B2			CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS
HSHT5	HGLST5	5 1/4	Specify	12 1/8	6 1/2 x 3/16 stl	18	Specify	28-N25	16-N25	16835	16835
HSHT7	HGLST7	6 7/8	Specify	13 3/4	6 1/2 x 3/16 stl	18	Specify	28-N25	16-N25	16835	16835
HSHT9	HGLST9	8 7/8	Specify	15 3/4	6 1/2 x 3/16 stl	18	Specify	28-N25	16-N25	16835	16835

<p>HSH HEAVY SADDLE HANGERS</p> <p>Design Features . . accommodate heavier loads than the SH saddle hanger.</p> <p>Finish . . KC® SUPERSPEED® gray paint.</p> <p>Ordering/Specifying Information . . when specifying H1 and H2 dimensions, measure from underside of top channel to top of seat.</p>		<p>HSH5</p>
<p>HHC HEAVY HINGE CONNECTORS</p> <p>HHC3</p> <p>Design Features . . support the bottom end of a glu-lam beam on the top of another supporting glu-lam beam of the same width and having the same top elevation. Seismic straps can be welded to side plate when H dimension is less than the minimum height requirement. Erection nail holes are provided for easy installation.</p> <p>Material . . bearing plate: $\frac{3}{4}$", 1", $1\frac{1}{4}$" and $1\frac{1}{2}$" steel. Welded to side plate of $\frac{3}{8}$" steel.</p> <p>Finish . . KC® SUPERSPEED® gray paint.</p> <p>Ordering/Specifying Information . . all HHC using three bolts should be ordered and identified as HHC3 (Example: HHC5-9 with three bolts, specify as HHC359).</p>		<p>HHC</p>
<p>HHCT HEAVY HINGE CONNECTOR TABS</p> <p>HHCM</p> <p>Design Features . . standardized seismic ties on hinge connector. The HHCT standardized is the most commonly ordered HHC special. While the HHCT design (as illustrated) is recommended, further modified alternates are available. HHCM design has slotted seismic ties as opposed pairs at the middle (centerline) of the HHC. T design denotes slotted tabs at top for HHC. M design denotes slotted tabs at middle (centerline) of HHC.</p> <p>Finish . . KC® SUPERSPEED® gray paint.</p> <p>Specify . . H dimension.</p> <p>Note . . machine bolts should be located in the top half on the slotted holes. See the HHC table for minimum three bolt tabs height design. Available in higher load values by increasing the D dimension. Contact factory for details.</p> <p>Ordering/Specifying Information . . all HHCM using four bolts in middle strap should be ordered and identified as HHC3/4M (Example: HHC5-9 with three bolt tabs and four bolt center straps, specify as HHC3/4M59).</p> <p>Special . . if the depth of the glu-lam is smaller than the minimum listed, adjust allowable load in direct proportion to height.</p>		<p>HHCT Shown with Round Holes 1 Side and Slotted Holes 1 Side</p> <p>HHCM</p> <p>HCTS3</p> <p>HCTS4 (Shown with Slotted Holes)</p> <p>HHC3/4M</p> <p>HHCT</p> <p>HHCM</p> <p>HCTS3</p> <p>HCTS4</p> <p>HHC3/4M</p>
<p>CPT CROSS PURFLIN TIES</p> <p>Design Features . . Supports purlins on either side of a glu-lam beam to resist seismic forces. The heavy square bar section works in both tension and compression. Designed for installation in pairs, the heavy square bar helps with drilling alignment. Offset in center section provides clearance for purlin hanger stirrups. Requires a $2\frac{1}{2}$" hole through the glu-lam beam for installation.</p> <p>Installation . . Hanger seat depth 4" are for CPT 18 and CPT 23.</p> <p>Hanger Seat depth 6" are for CPT 27 and CPT 38.</p> <p>Material . . $\frac{5}{8}$" & $\frac{3}{4}$" Bar Stock</p> <p>Finish . . KC® SUPERSPEED® Gray Paint</p>	<p>Top View Installed in Pairs</p>	<p>L</p> <p>4" Typ - CPT18, 23, 27 4 1/2" Typ - CPT38</p>

For Product Substitutions ... the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD EACH SIDE		UPLIFT EACH SIDE LBS
		W1 & W2	S	H1 & H2	CARRYING BEAM	SUPPORTED BEAM	NORMAL LBS	ROOF LBS	
HSH5	HGLS5	5½	Specify	Specify	28-N25	16-N25	16835	16835	2110
HSH7	HGLS7	6¾	Specify	Specify	28-N25	16-N25	16835	16835	2110
HSH9	HGLS9	8¾	Specify	Specify	28-N25	16-N25	16835	16835	2110

For Product Substitutions ... the **ONLY APPROVED EQUAL™**

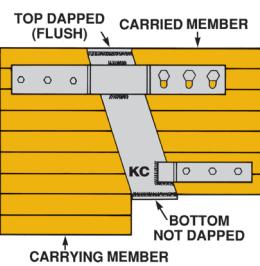
KC® STK NO	REF NO	MIN H DIMENSIONS		DIMENSIONS (INCHES)			BOLT SCHEDULE		DESIGN LOAD (LBS)	
		@ 560 PSI	@ 650 PSI	T	D	W	P	HHC 4-¾ MB	HHC3 6-¾ MB	@ 560 PSI NORMAL
HHC55	HCA55	14¾	16	¾	5	5¼	5	¾ x 7 MB	14350	16660
HHC56	HCA56	19	21	¾	6	5¼	6	¾ x 7 MB	17220	19990
HHC57	HCA57	23½	26	¾	7	5¼	6	¾ x 7 MB	20090	23320
HHC59	HCA59	35¼	40	¾	9	5¼	6	¾ x 7 MB	25830	29980
HHC75	HCA75	17¾	19½	1	5	6¾	5	¾ x 9 MB	18900	21940
HHC76	HCA76	23	25½	1	6	6¾	6	¾ x 9 MB	22680	26325
HHC77	HCA77	29¼	33	1	7	6¾	7	¾ x 9 MB	26460	30715
HHC79	HCA79	35¾	40½	1	9	6¾	7	¾ x 9 MB	34020	39490
HHC95	HCA95	21¼	23½	1¼	5	8¾	5	¾ x 11 MB	24500	28440
HHC96	HCA96	28	31½	1¼	6	8¾	6	¾ x 11 MB	29400	34125
HHC97	HCA97	36¼	41	1¼	7	8¾	7	¾ x 11 MB	34300	39815
HHC99	HCA99	56	64	1¼	9	8¾	8	¾ x 11 MB	44100	51190
HHC115	HCA115	26	20½	1½	5	10¾	5	¾ x 13 MB	30100	34940
HHC116	HCA116	35	27	1½	6	10¾	6	¾ x 13 MB	36120	41925
HHC117	HCA117	40	34½	1½	7	10¾	7	¾ x 13 MB	36970	48915
HHC119	HCA119	40	53½	1½	9	10¾	8	¾ x 13 MB	28865	56690
HHC355	HCA355	11¾	12½	¾	5	5¼	5	¾ x 7 MB	14350	16660
HHC356	HCA356	14½	16	¾	6	5¼	6	¾ x 7 MB	17220	19990
HHC357	HCA357	17¾	19½	¾	7	5¼	6	¾ x 7 MB	20090	23320
HHC359	HCA359	25½	28½	¾	9	5¼	6	¾ x 7 MB	25830	29980
HHC375	HCA375	13%	15	1	5	6¾	5	¾ x 9 MB	18900	21940
HHC376	HCA376	17¼	19	1	6	6¾	6	¾ x 9 MB	22680	26325
HHC377	HCA377	21½	24	1	7	6¾	7	¾ x 9 MB	26460	30715
HHC379	HCA379	31½	35½	1	9	6¾	7	¾ x 9 MB	34020	39490
HHC395	HCA395	16	17½	1¼	5	8¾	5	¾ x 11 MB	24500	28440
HHC396	HCA396	20%	23	1¼	6	8¾	6	¾ x 11 MB	29400	34125
HHC397	HCA397	26	29	1¼	7	8¾	7	¾ x 11 MB	34300	39815
HHC399	HCA399	39¼	44½	1¼	9	8¾	8	¾ x 11 MB	44100	51190
HHC3115	HCA3115	20	20½	1½	5	10¾	5	¾ x 13 MB	30100	34940
HHC3116	HCA3116	26	27	1½	6	10¾	6	¾ x 13 MB	36120	41925
HHC3117	HCA3117	33	34½	1½	7	10¾	7	¾ x 13 MB	42140	48915
HCA3119	HCA3119	40	53½	1½	9	10¾	8	¾ x 13 MB	42865	56690

For Product Substitutions ... the **ONLY APPROVED EQUAL™**

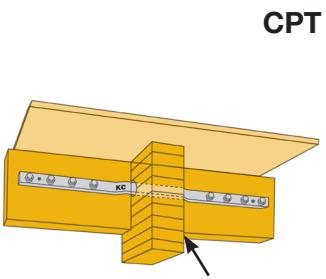
KC® STK NO	REF NO	BOLT SCHEDULE	STRAP SIZE MATERIAL WIDTH (INCHES)		BOLTS (TOTAL)	DESIGN LOAD MAX (LBS) HORIZONTAL LOAD
HCTS2	HCST2	2-¾ MB	¾" STL		3½	4-¾ MB
HCTS3	HCST3	3-¾ MB	¾" STL		3½	6-¾ MB
HCTS4	HCST4	4-¾ MB	¼" STL		3½	8-¾ MB

For Product Substitutions ... the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL (INCHES)	STRAP SIZE (INCHES)	BOLT SCHEDULE	LOCATION	UBC BOLT CODE VALUES	
						3½ W = LBS	5½ W = LBS
HHC3T	HC3T	¾" STL	3½ x 12½	3-¾ MB	4" Center of Bolts from Top	10440	13730

For Product Substitutions ... the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	TUBE THICKNESS	TOTAL LENGTH L	L ₁	L ₂	NO AND SIZE OF BOLT	DESIGN LOAD PER PAIR OF CPTS (LBS)						
							STEEL TENSION	STEEL COMPRESSION	BOLTS (DOUBLE SHEAR) (133%) LENGTH OF BOLT IN PURFLIN				
									3½"	3½"	5½"	5½"	6¾"
CPT18	PCT18	½"	38"	14"	17¾"	8-½ MB	24665	19170	14365	15925	15925	15905	15875
CPT23	PCT23	½"	33"	14"	17¾"	10-½ MB	24665	19170	17720	19710	19710	19685	19600
CPT27	PCT27	¾"	42"	19½"	23½"	12-½ MB	39665	28680	20715	23090	23665	23685	23550
CPT38	PCT38	¾"	50"	19½"	23½"	12-¾ MB	39665	28680	24260	27530	33750	33815	33500



BS**BEAM SEATS**

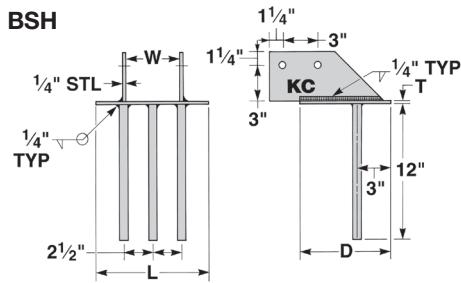
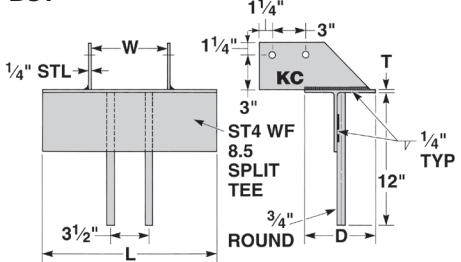
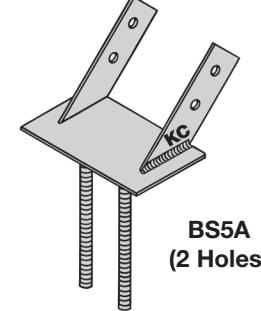
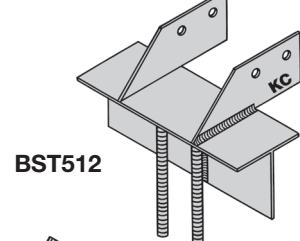
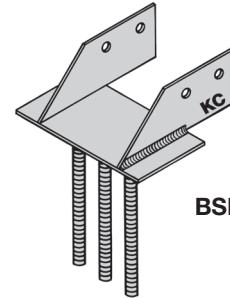
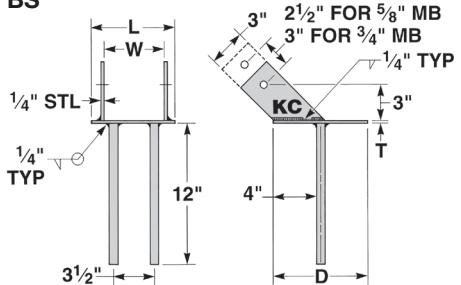
Design Features . . three different configurations for use over pilasters to provide bearing plate and connections for beams and glu-lam beams.

KC® Stock	Tabs	Reinforcing Dowels
BS	Single Bolt Alternate Two Bolts	Two, $\frac{3}{4}$ " x 12"
BSH	Sloped	Three, $\frac{3}{4}$ " x 12"
BST	Combination	Two, $\frac{3}{4}$ " x 12"

- (1) The **BSH** models may be ordered to sizes shown in the **BS** table having lesser bearing dimensions and bearing values, but providing these beam-tie values.
- (2) The **BST-5½** is a WT4 WF8.5 Split-**T**. The **BST-6½** is a WT4 WF12.0 Split-**T**.
- (3) These values must be reduced 50% for uninspected installations.
- (4) Values may be increased for short-term, except where otherwise limited.

Material . . $\frac{1}{4}$ ", $\frac{3}{8}$ " and $\frac{5}{8}$ " steel with erection nails provided for easy installation.

Finish . . KC® **SUPERSPEED**® gray paint.

BSH**BST****BS**

ANCHORS AND STRAPS

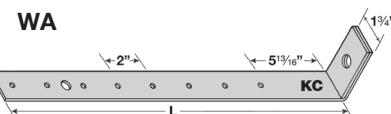
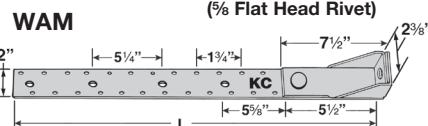
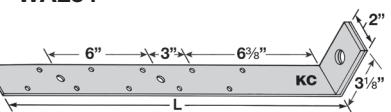
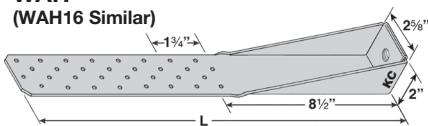
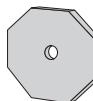
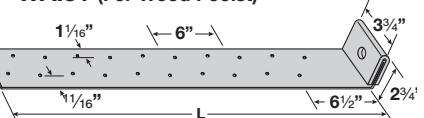
WA **WALL ANCHORS/WASHERS**

Design Features . . four configurations meet a variety of size and load specifications. The wall anchors are for repair work (upgrading to new code values) or as a substitute for a strap anchor (which is set in concrete). The wall anchor washers are made from $\frac{3}{8}$ " steel, 6" x 6". They secure the outside of walls to the roof or floor with a $\frac{3}{4}$ " all-thread or a $\frac{3}{4}$ " bolt.

Material . . 16 ga., 12 ga. and 11 ga. galvanized steel, $\frac{3}{8}$ " plate, KC® **SUPERSPEED**® gray paint.

Loads . . hole patterns and locations are staggered and sized for 10d and 16d nails. The **WAL** anchor, with 3" spacing, is acceptable for wood I-joint use when 10d nailing is used.

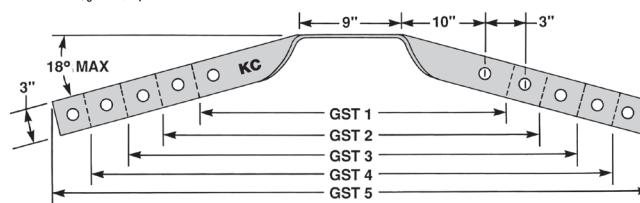
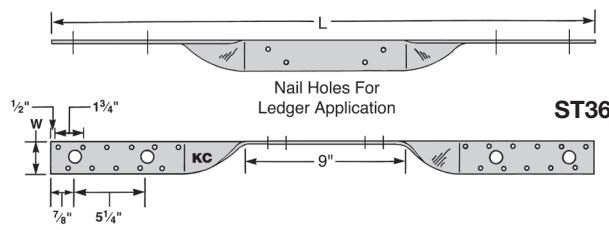
Special . . the wall anchors are especially designed for true anchorage alignment over joists or purlins by bolting into concrete walls or foundations. The 1-piece design and seat thickness afford extra added strength. The **WAW** is the recommended washer for use with the **WA** wall anchors.

WA**WAM****WAL34****WAH****WAI31 (For Wood I-Joist)****ST****STRAP TIES/GLU-LAM STRUT TIES**

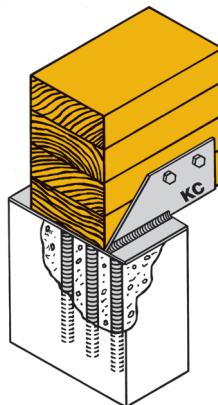
Design Features . . of the **ST** series make it ideal for tying purlins intersecting at a glu-lam beam . . cross-member seismic tying the **ST** is also used for anchoring purlins to ledgers. Bolt and nail loads may not be combined. The **GST** series is designed to bridge over carrier beams and tie two opposing purlins with a minimum width of 4" nominal . . thus creating a drag strut or chord tie. It is also a high value cross-member seismic tie.

Series	Materials	Finish
ST	12 Ga. Galvanized Steel	—
GST	$\frac{1}{4}$ " Steel	Painted

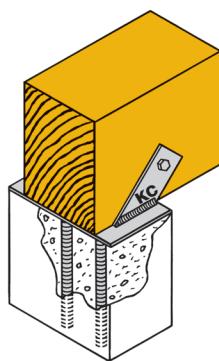
Finish . . GST KC® **SUPERSPEED**® gray paint



KC® STK NO	REF NO	DIMENSIONS (INCHES)				BOLT SIZE	DESIGN LOAD		
		T	D	W	L		MASONRY @ 170 psi LBS	MASONRY @ 340 psi LBS	CONCRETE @ 650 psi LBS
BS5A	GLB5A	1/4	5	5 1/4	7	5/8 x 7 MB	4465	8925	16405
BS5B	GLB5B	3/8	6	5 1/4	7	5/8 x 7 MB	5355	10710	19690
BS5C	GLB5C	3/8	7	5 1/4	7	5/8 x 7 MB	6250	12500	22970
BS5D	GLB5D	3/8	8	5 1/4	7	5/8 x 7 MB	7140	14280	26250
BS7A	GLB7A	1/4	5	6 7/8	9	3/4 x 9 MB	5950	11900	21875
BS7B	GLB7B	3/8	6	6 7/8	9	3/4 x 9 MB	7140	14280	26250
BS7C	GLB7C	3/8	7	6 7/8	9	3/4 x 9 MB	8330	16660	30625
BS7D	GLB7D	3/8	8	6 7/8	9	3/4 x 9 MB	9520	19040	35000



BSHA



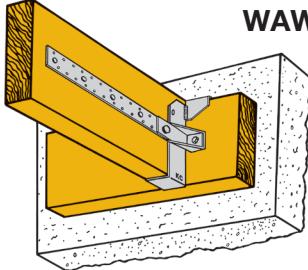
BST5A

KC® STK NO	REF NO	DIMENSIONS (INCHES)				BOLT SIZE	DESIGN LOAD (LBS)				DESIGN BOLT LOAD LBS HORIZ		
		T	D	W	L		MASONRY @ 170 PSI LBS	MASONRY @ 340 PSI LBS	ON CONCRETE WITH GLU-LAM SIZES				
BSHA	HGLBA	1/4	5	Specify	10	2-3/4 MB	9400	18750	11530	15190	19690	—	9535
BSHB	HGLBB	3/8	6	Specify	10	2-3/4 MB	11280	22500	13840	16225	23625	—	9535
BSHC	HGLBC	3/8	7	Specify	10	2-3/4 MB	13160	26250	16140	21260	27560	—	9535
BSHD	HGLBD	3/8	8	Specify	10	2-3/4 MB	15040	30000	18450	24300	31500	—	9535
BST512	GLBT512	5/16	5 1/4	Specify	12	2-3/4 MB	11845	23625	12110	15945	20670	—	9535
BST612	GLBT612	3/8	6 1/2	Specify	12	2-3/4 MB	14665	29250	14990	19745	25595	—	9535
BST516	GLBT516	5/16	5 1/4	Specify	16	2-3/4 MB	15790	31500	121110	15945	20670	25395	9535
BST616	GLBT616	3/8	6 1/2	Specify	16	2-3/4 MB	19550	39000	14990	19745	25595	31445	9535
BST520	GLBT520	5/16	5 1/4	Specify	20	2-3/4 MB	19740	39375	121110	15945	20670	25395	9535
BST620	GLBT620	3/8	6 1/2	Specify	20	2-3/4 MB	24440	48750	14990	19745	25995	31445	9535

ANCHORS AND STRAPS

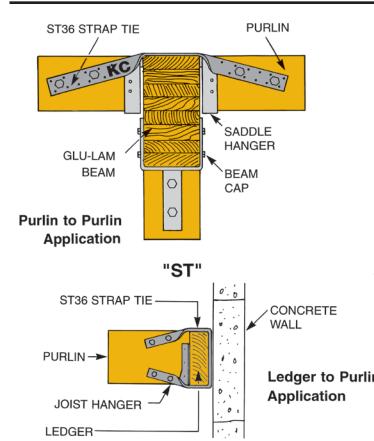
KC® STK NO	REF NO	MATERIAL (INCHES)		LENGTH	NAIL & BOLT SCHEDULE			DESIGN LOAD (MAX)	
		STRAP	BASE THICKNESS		PURLIN	BASE		NAIL LBS	BOLT LBS
WA	LTT19	16 ga gal	1/4 stl	19 1/8	*8-16d	—	3/4	1440	—
WAI31	LTT131	18 ga gal	1/4 stl	31	18-10d x 1 1/2	—	5/8	1880	—
WAL34 O	LTT20B	12 ga gal	5/16 stl	20	10-16d	2-1/2 MB	3/4	1920	1250
WAH16	HTT4/HTT16	11 ga gal	1/2 stl	16	*18-16d	—	5/8	4305	—
WAH	HTT5/HTT22	11 ga gal	1/2 stl	22	*32-16d	—	5/8	5460	—
WAM	MTT28B	12 ga gal	3/8 stl	27 11/16	24-16d	4-1/2 MB	3/4	4605	2505
WAW	RP6	—	3/8 stl	6 x 6	—	—	3/4	—	—

* 16d sinkers should be used for full table values. If a 1/2" or 5/8" Anchor bolt is used, add a O standard cut washer to the seat.



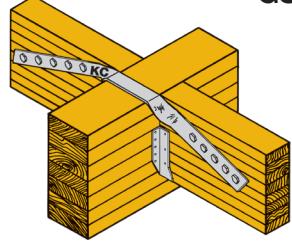
WAM

KC® STK NO	REF NO	DIMENSIONS (INCHES)		LENGTH	NAIL & BOLT SCHEDULE		DESIGN LOAD MAX (LBS)	
		BOLT	NAIL		BOLT	NAIL	BOLT	NAIL
ST36	SA36	36	22-16d	4-1/2 MB	1300	1585		
GST1	HSA32	32	—	2-3/4 MB	2090	—		
GST2	HSA41	38	—	4-3/4 MB	4175	—		
GST3	HSA50	44	—	6-3/4 MB	6260	—		
GST4	HSA59	50	—	8-3/4 MB	8350	—		
GST5	HSA68	56	—	10-3/4 MB	10435	—		



ST

GST



GST5

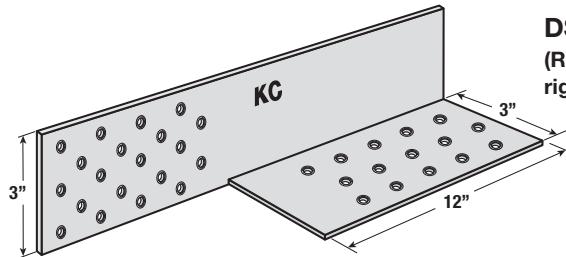
DST DRAG STRUT TIES

Design Features . . installation is easy with 16d common nails. Embossed for nail guns.

Material . . 10 gage steel.

Finish . . galvanized.

Ordering Information . . specify right or left handed part.

**DST4**

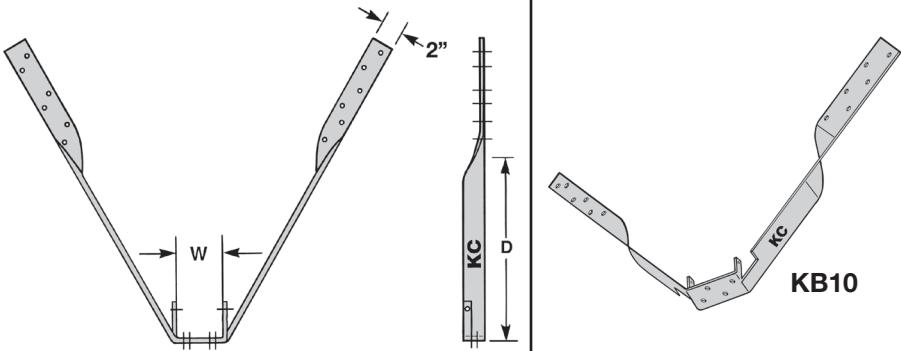
(Right hand DST shown: specify right or left hand when ordering)

KB KNEE BRACES

Design Features . . make these nail-only braces up to 65% easier to install . . provide lateral resistance at beam bottom . . add more square inches of seat-bearing for greater load capacity . . are adjustable for field bending. Design loads at 45° are for tension only. Base tabs provide stabilizing action for the beam and ease of nailing to the beam sides, rather than nailing up into the bottom of the beam.

Material . . 12 ga. galvanized steel.

Nails . . N25, furnished.

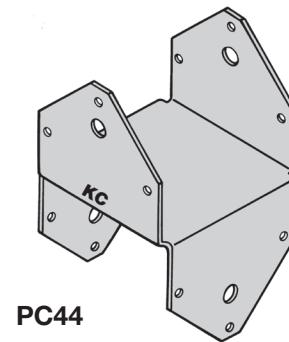
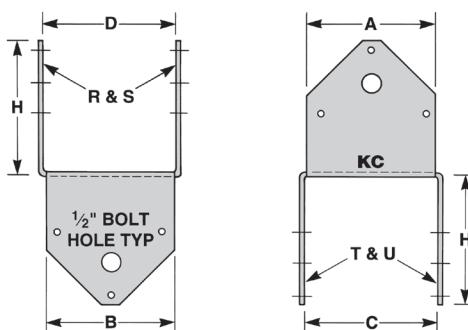


POST CAPS

PC POST CAPS

Design Features . . clean, new 1-piece design looks better, has no spot welds to break loose . . have a dual purpose application as post cap and post base . . 1/2" bolt holes are provided for heavy-duty post beam requirements or for reinforcing bar when set in concrete. Post caps are also available on special order for rough beam sizes.

Material . . 18 ga. galvanized steel.

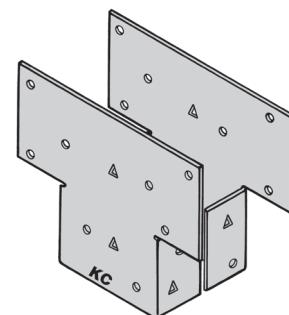
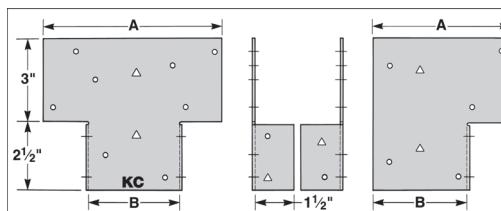
**PB POST BEAM CAPS****EPB
LEPB4**

Design Features . . offer complete installation flexibility before, during or after beams are erected . . all corners are enclosed for added structural strength and a clean, neat appearance. **EPB** . . end post beam cap can be specified as **EPB4**, **EPB6**, etc. **PB** . . post beam caps should be used in pairs (see illustration). Post beam caps are also available on special order for rough beam sizes.

Material . . 18 ga. galvanized steel.

Loads . . nail hole pattern and location are staggered and sized for 16d nails; optional triangle holes are for maximum nailing loads.

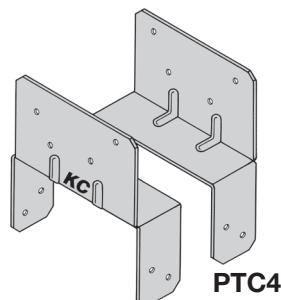
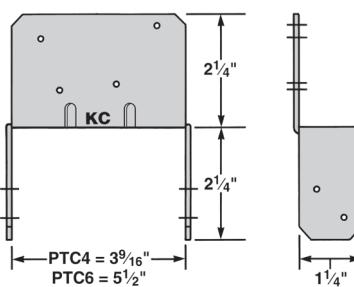
Special . . The new **LEPB4** is a universal product that eliminates the need for right and left hand parts and can also be used for 4x and 6x timbers with high load capacity.

**PB4****PTC POST TIE CAPS**

Design Features . . used to tie 4x posts to 3" members (**PTC4**), or 6x posts to 3" members (**PTC6**).

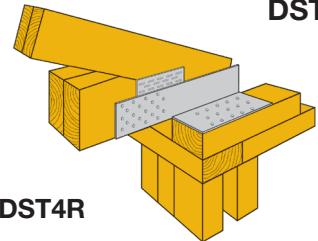
Material . . PTC4, 18 ga. galvanized steel; PTC6, 16 ga. galvanized steel.

Installation . . used in pairs . . makes **PTC** adjustable.

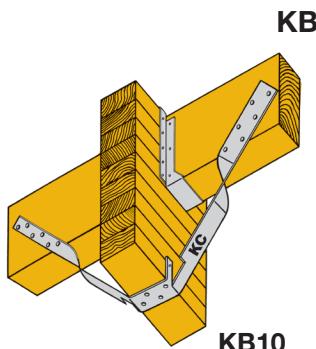
**PTC4**

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	LENGTH (INCHES)	NAIL SCHEDULE	DESIGN LOAD (LBS) (133%)	
				COMPRESS	TENSION
DST4	DSC4	24	44-16D	5015	5015

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

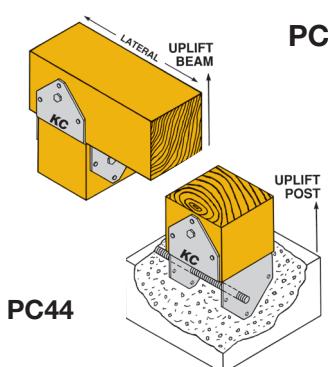
KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)		LENGTH (FEET)	NAIL SCHEDULE	DESIGN LOAD AT 45°	
			D	W			NORMAL LBS	MAX LBS
KB5	VB5	12 ga gal	10-15	Specify	5	16-N25	15570	1570
KB7	VB7	12 ga gal	15-22½	Specify	7	16-N25	1570	1570
KB8	VB8	12 ga gal	22½-28½	Specify	8	16-N25	1570	1570
KB10	VB10	12 ga gal	28½-36	Specify	10	16-N25	1570	1570
KB12	VB12	12 ga gal	36-42	Specify	12	16-N25	1570	1570



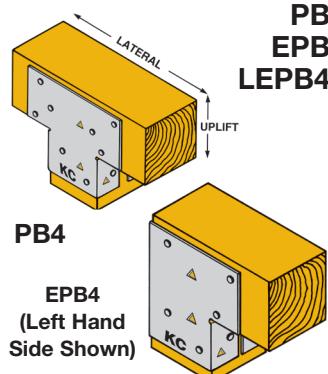
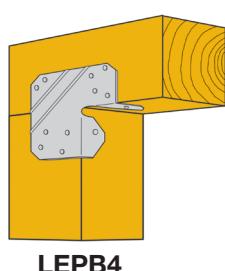
POST CAPS

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

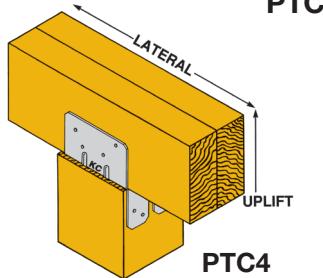
KC® STK NO	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD		
				A	B	C	D	H	R & S	T & U	UPLIFT LBS	LATERAL LBS
PC44	BC4	4 x 4	18 ga gal	3¼	3¼	3¾	3¾	3	6-16d	6-16d	980	1005
PC46	BC46	4 x 6	18 ga gal	5½	3¼	5½	3¾	3½	6-16d	10-16d	980	1005
PC66	BC6	6 x 6	18 ga gal	5¾	5¾	5½	5½	3¾	10-16d	10-16d	1340	1675
PC88	BC8	8 x 8	18 ga gal	7	7	7½	7½	4	12-16d	12-16d	1965	2010
PC44R	BC4R	Rough 4 x 4	18 ga gal	3¼	3¼	4	4	2¾	6-16d	6-16d	980	1005

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD	
				A	B	BEAM	POST	UPLIFT	LATERAL LBS
PB4	AC4	4 x —	18 ga gal	6½	3¾	MIN 12-16d	8-16d	1430	715
						MAX 14-16d	14-16d	2500	1070
PB6	AC6	6 x —	18 ga gal	8½	5½	MIN 12-16d	8-16d	1430	715
						MAX 14-16d	14-16d	2500	1070
EPB4	ACE4	End 4X	18 ga gal	5	3¾	MIN 8-16d	6-16d	1070	715
						MAX 10-16d	10-16d	1785	1070
EPB6	ACE6	End 6X	18 ga gal	7	5½	MIN 8-16d	6-16d	1070	715
						MAX 10-16d	10-16d	1785	1070
LEPB4	LCE4	4X & 6X End	18 ga gal	5¾	3	14-16d	10-16d	1905	1425

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)	
		BEAM	POST	UPLIFT	LATERAL
PTC4	LPC4	8-10d	8-10d	990	495
PTC6	LPC6	8-10d	8-10d	990	495

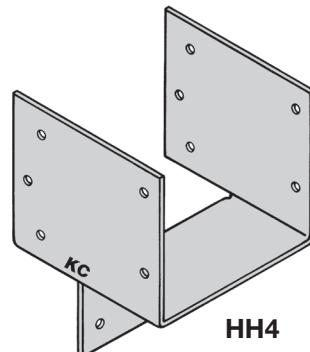
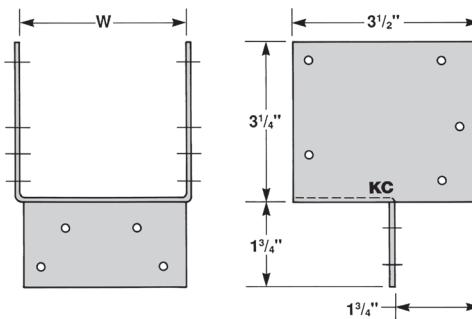


MC
HH

MULLION CLIPS/HEADER HANGERS

Design Features . . offers greater economy in installing door and window headers with faster, more accurate installation that strengthens the frame and eliminates toe-nailing and the need for cripples. **HH** hangers can also be used for other cross-member detail applications. In addition, design features provide dimensional accuracy for metal support of vertical or lateral loads at the window sill member and at the post or mullion member. Dimensional accuracy is also provided for fast, accurate framing for fence construction and other framing applications. For added strength, clip nails are in three dimensions.

Material . . 18 ga. galvanized steel.



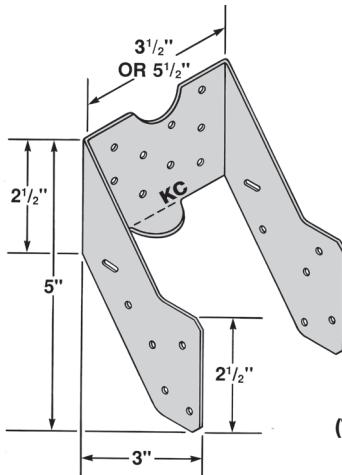
TCB

TRUSS CLIP BASES

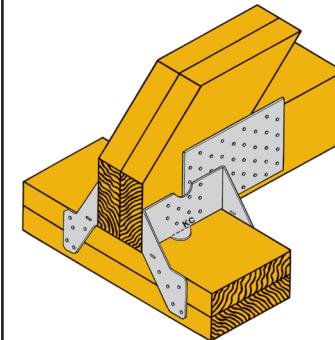
Design Features . . comes in two sizes which will work with any quantity of girder plys. The truss or girder load is transferred by the **TCB** to the plate for conditions with limited bearing. An added benefit is extra uplift provided. The **TCB** replaces the lower load-transfer systems.

Material . . 18 ga. galvanized steel.

Installation . . the **TCBs** must be installed in pairs.



TCB4
(**TCB6** Similar)



TCB6
Two **TCB** Bases Installed
with a Two-Ply Girder Truss

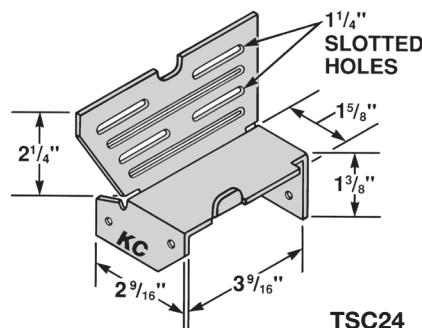
TSC

TRUSS SCISSORS CONNECTORS

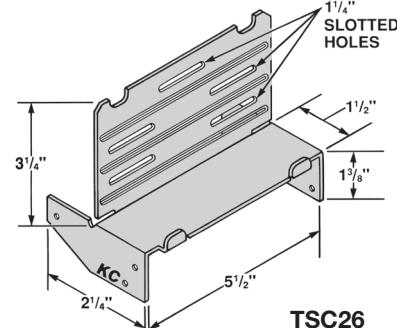
Design Features . . for scissor truss installation the **TSC** connector is the ultimate fastener, it attaches the plated truss to the top or sill plates for uplift resistance. The **TSC** allows the necessary horizontal movement (up to 1 1/4") during installation of the roof material.

Material . . 16 ga. galvanized steel.

Installation . . 10d nails must be driven into the truss through the end of the slotted hole closest to the end of the truss' center. Do not seat these nails, allowing for the necessary truss movement.



TSC24



TSC26

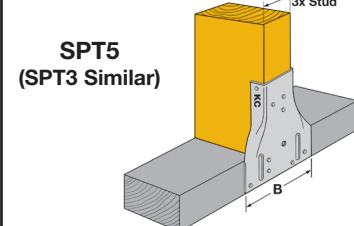
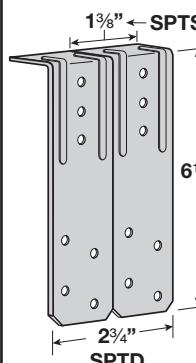
SPT

STUD PLATE TIES

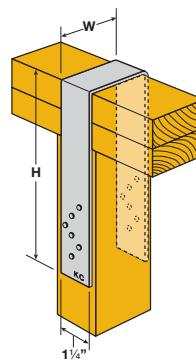
Design Features . . SPTs are used for wind resistance or seismic conditions. The Stud Plate Ties fasten the bottom plate or the top plate (double plate) to the studs.

Material . . **SPTH18** ga. galvanized steel. All other parts 20 ga. galvanized steel.

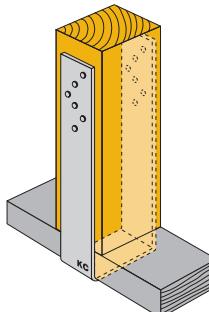
Installation . . use all specified fasteners. Nails must be installed into the plate before the stud. **SPT4**, **SPT6** and **SPT8** wrap completely around the double top plates. **SPTR** (Stud Plate Tie Reversible) has locating lines which aid in placement on single bottom plate or double top plate conditions.

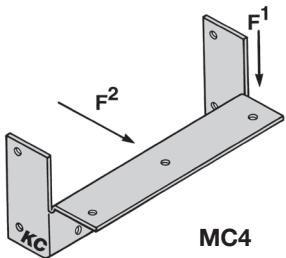


SPT1
(**SPT2** Similar)



SPT4/6/8
SPTH4/6/8
(Over Top Plates)



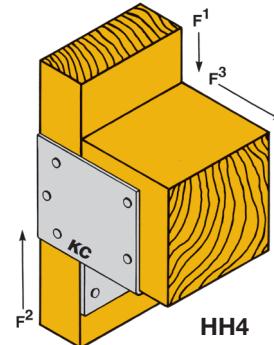
MC
HH

MC4

KC® STK NO	REF NO	DIM W (INCHES)	MATERIAL	NAIL SCHEDULE		DESIGN LOAD (LBS)	
				B or C	D or E	F^1	F^2
MC4	FC4	3 $\frac{3}{16}$	18 ga gal	2-16d	2-16d	800	265
MC6	FC6	5 $\frac{1}{2}$	18 ga gal	3-16d	2-16d	935	400

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	DIM W (INCHES)	MATERIAL	NAIL SCHEDULE		DESIGN LOAD (LBS)		
				STUD MULLION	HEADER	F^1	F^2	F^3
HH4	HH4	3 $\frac{3}{16}$	18 ga gal	10-16d	4-16d	1205	710	710
HH6	HH6	5 $\frac{1}{2}$	18 ga gal	12-16d	6-16d	1605	1065	1065

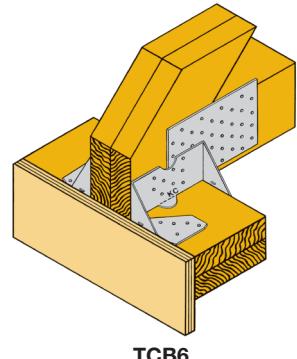


HH4

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	JOIST SIZE	NUMBER OF RAFTER PLYS	NAIL SCHEDULE		DESIGN LOAD (LBS)			
				RAFTER		PLATE	UPLIFT	ROOF	
				1	20-10d x 1 $\frac{1}{2}$			SNOW CONST	
TCB4	TBE4	2 x 4	1	20-10d x 1 $\frac{1}{2}$	20-10d x 1 $\frac{1}{2}$	990	2140	2325	
			2 or more	20-10d	20-10d	990	2570	2800	
TCB6	TBE6	2 x 6	1	20-10d x 1 $\frac{1}{2}$	20-10d x 1 $\frac{1}{2}$	990	2140	2325	
			2 or more	20-10d	20-10d	990	2570	2800	

TCB



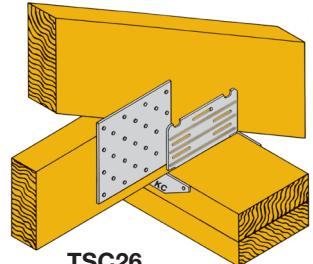
TCB6

Alternate Installation for a Pre-sheathed Shear Wall Condition

TSC

For Product Substitutions . . . the ONLY APPROVED EQUAL™

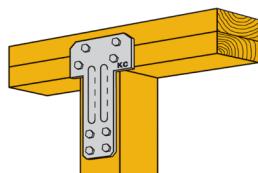
KC® STK NO	REF NO	NAIL SCHEDULE		DESIGN LOAD (LBS)		
		TRUSS	PLATE	UPLIFT	LATERAL	
TSC24	TC24	4-10d	4-10d	600	165	
TSC26	TC26	5-10d	6-10d	755	270	



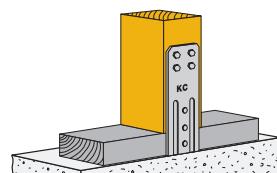
TSC26

For Product Substitutions . . . the ONLY APPROVED EQUAL™

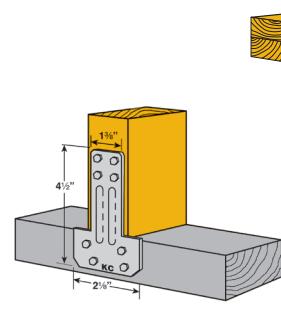
KC® STK NO	REF NO	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD (LBS)	
		W	B	H	STUD	PLATE	UPLIFT (160%)
SPT1	SP1	1 $\frac{1}{16}$	3 $\frac{1}{2}$	5 $\frac{1}{16}$	6-10d	4-10d	595
SPT2	SP2	1 $\frac{1}{16}$	3 $\frac{1}{2}$	6 $\frac{1}{8}$	6-10d	6-10d	1100
SPT3	SP3	2 $\frac{3}{16}$	4 $\frac{1}{2}$	6 $\frac{1}{8}$	6-10d	6-10d	1100
SPT4	SP4	3 $\frac{3}{16}$	1 $\frac{1}{4}$	7 $\frac{1}{16}$	6-10d x 1 $\frac{1}{2}$	—	735
SPT5	SP5	2 $\frac{3}{16}$	4 $\frac{1}{2}$	5 $\frac{1}{16}$	6-10d	4-10d	595
SPT6	SP6	5 $\frac{5}{16}$	1 $\frac{1}{4}$	7 $\frac{3}{4}$	6-10d x 1 $\frac{1}{2}$	—	735
SPT8	SP8	7 $\frac{5}{16}$	1 $\frac{1}{4}$	8 $\frac{5}{16}$	6-10d x 1 $\frac{1}{2}$	—	735
SPTH4	SPH4	3 $\frac{3}{16}$	1 $\frac{1}{4}$	8 $\frac{3}{8}$	10-10d x 1 $\frac{1}{2}$	—	1240
					12-10d x 1 $\frac{1}{2}$	—	1365
SPTH6	SPH6	5 $\frac{5}{16}$	1 $\frac{1}{4}$	9 $\frac{1}{4}$	10-10d x 1 $\frac{1}{2}$	—	1240
					12-10d x 1 $\frac{1}{2}$	—	1365
SPTH8	SPH8	7 $\frac{5}{16}$	1 $\frac{1}{4}$	8 $\frac{3}{8}$	10-10d x 1 $\frac{1}{2}$	—	1240
					12-10d x 1 $\frac{1}{2}$	—	1365
SPTR (1)	RPS4(1)	1 $\frac{1}{8}$	2 $\frac{1}{8}$	4 $\frac{1}{2}$	4-8d x 1 $\frac{1}{2}$	4-8d x 1 $\frac{1}{2}$	325
SPTR (2)	RSP4(2)	1 $\frac{1}{8}$	2 $\frac{1}{8}$	4 $\frac{1}{2}$	4-8d x 1 $\frac{1}{2}$	4-8d x 1 $\frac{1}{2}$	455
SPTS (1)	SSP (1)	1 $\frac{1}{8}$	1 $\frac{1}{8}$	6 $\frac{1}{16}$	4-10d x 1 $\frac{1}{2}$	1-10d x 1 $\frac{1}{2}$	325
					4-10d	1-10d	420
SPTS (2)	SSP (2)	1 $\frac{1}{8}$	1 $\frac{1}{8}$	6 $\frac{1}{16}$	4-10d x 1 $\frac{1}{2}$	3-10d	435
					8-10d	2-10d	545
SPTD (1)	DSP (1)	2 $\frac{3}{4}$	1 $\frac{1}{8}$	6 $\frac{1}{16}$	8-10d x 1 $\frac{1}{2}$	2-10d x 1 $\frac{1}{2}$	600
					8-10d	2-10d	775
SPTD (2)	DSP (2)	2 $\frac{3}{4}$	1 $\frac{1}{8}$	6 $\frac{1}{16}$	8-10d x 1 $\frac{1}{2}$	6-10d x 1 $\frac{1}{2}$	825
					8-10d	6-10d	

SPT
SPTH
SPTR
SPTS
SPTD

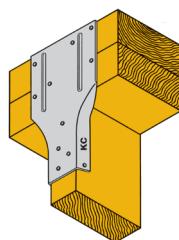
SPTR Stud to Double Top Plate (2)



SPTS (1)



SPTD (2)



SPT2

(1) = SINGLE PLATE (2) = DOUBLE PLATE

METALS PRODUCTS, INC.
SUPERSPEED® CONNECTORS

© Copyright KC® METAL PRODUCTS, INC.

BC STUD PLATE TIES

EBC Design Features . . eleven configurations provide complete application flexibility.

Stock No. Design Configuration

BC Standard beam cap

BC/EBC@90° Standard or end beam caps; post straps may be rotated 90° on special order, when beam is larger than post

EBC End beam cap

EBC9/EBC10 Use four beam bolts

BCO Beam cap for welding to square tubes, pipes and other columns

BCOB Cross beam connector, the result of back-to-back welding of two beam caps

BCC Center beam caps with $\frac{3}{16}$ " stirrups (2) welded to cap

BCT "T" beam caps with $\frac{3}{16}$ " stirrups (1) welded to cap

EBCL "L" beam cap offset right or left with $\frac{3}{16}$ " stirrups (1) welded to cap

BCQ EBCQ NEW . . this design uses KC® SUPERSPEED® Drive Screws to provide faster installation and maintain the wood cross section. The SDS screws provide for a lower profile compared to standard through bolts. BCQ supplied with KC® SUPERSPEED® SDS $\frac{1}{4}$ " x 2" Drive Screws.

To specify screw type beam caps use the letter "Q" after any style beam cap stock number. Example: BC 5 $\frac{1}{4}$ -6 now is BCQ 5 $\frac{1}{4}$ -6. "Q" stands for quick installation.

Material . . **BC**, **BCQ**, **EBC** and **EBCQ** sizes: 3 $\frac{1}{4}$ ", 4X and 6X are $\frac{3}{16}$ " steel. All other sizes are 1/4" steel.

Finish . . KC® SUPERSPEED® gray paint.

Loads . . **BCC**, **BCT** and **EBCL** series: the side stirrups maximum allowable down load may not exceed 40% of the design load specified in the table for the standard product, and cannot exceed 10,665 lbs. The total sum of the loads may not exceed the design load table value . .

Special . . also available in width of 7 $\frac{1}{8}$ " for use with LVL and PSL engineered wood products.

Ordering/Specifying Information . .

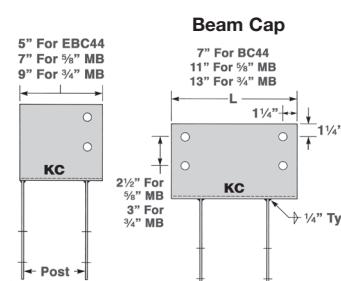
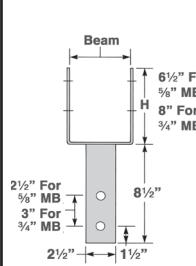
examples follow:

BC46 – beam is the first number, 4 (3 $\frac{1}{16}$ "); post is the second number, 6 (5 $\frac{1}{2}$ ").

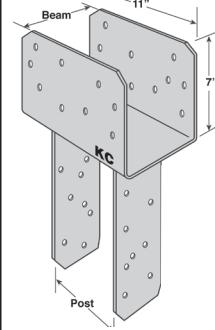
BCC66 – W3 & 4 = 6 (5 $\frac{1}{2}$ ") and H2 & H3 = 6 $\frac{1}{2}$ " is a **BCC66** beam cap with 6 (5 $\frac{1}{2}$ ") beams on each side with all beam seats flush.

EBCL66L – W3 = 4 (3 $\frac{1}{16}$ "), H2 = 8 is an **EBC66** end beam cap with a 4x (3 $\frac{1}{16}$ ") beam on the left side (specify beam L for left side beam stirrup). The stirrup seat is 1 $\frac{1}{2}$ " below the cap seat.

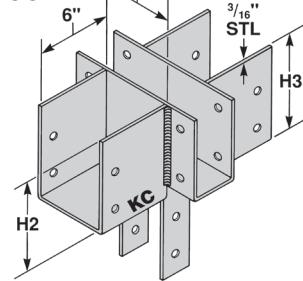
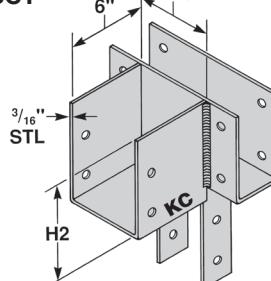
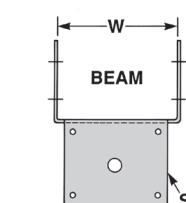
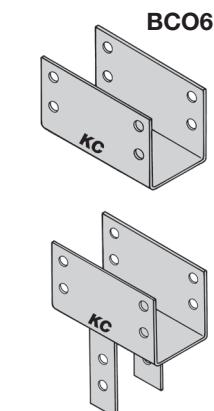
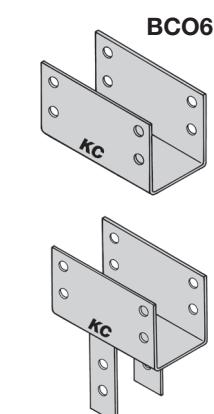
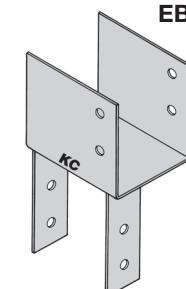
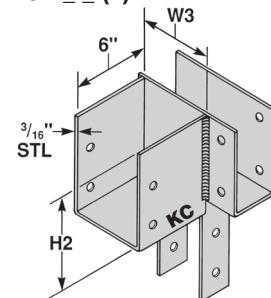
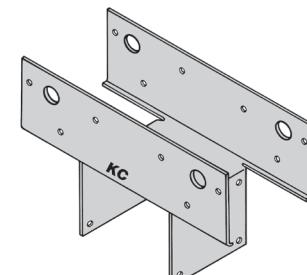
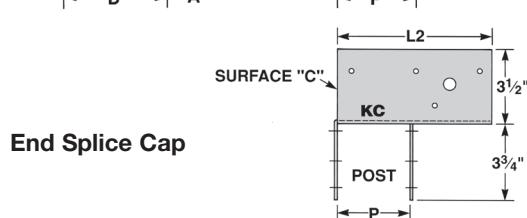
Specify the height of the stirrup from the top of the cap. The minimum H for the stirrup is 6 $\frac{1}{2}$ ". The L dimensions may vary depending on W3.

End Beam Cap**BCQ46**

End Type Cap = 8 1/2"



KC® SUPERSPEED®
Drive Screws
Used With This Product

BCC**BCT****EBCL** (L)**End Splice Cap****SC66****SC SPICE CAPS**

Design Features . . two convenient configurations, as listed below.

Stock No. Design Configuration

SC Standard splice cap

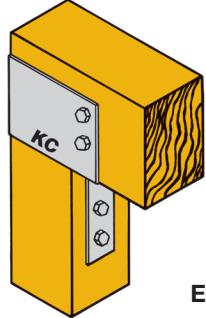
ESC End splice cap

SC series meets specifications for beam-over-post connections or where splice occurs. Greater nail edge distances provide higher load values. Bolt holes provide optional installation with $\frac{1}{2}$ " bolts.

Material . . 12 ga. galvanized steel. To order 16 ga. galvanized steel, add 16 to stock no. (Example: SC44-16).

Ordering Information . . Example: **SC46**, beam is the first number, 4 (3 $\frac{1}{16}$ "); post is the second number, 6 (5 $\frac{1}{2}$ ").

BC
EBC
BCO
BCOB
BCC
BCT
EBCL
BCQ
EBCQ



EBC66

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)				BOLT SCHEDULE			DESIGN LOAD (LBS)			
		BEAM WIDTH (INCHES)	POST WIDTH (INCHES)	MATERIAL (INCHES)	L		H	BEAM BOLTS (INCHES)	POST BOLTS (INCHES)	DOWN		
					BC	EBC	H			BC (100%)	EBC (100%)	
BC44	CC44	3 ¹ / ₁₆	3 ¹ / ₁₆	3/16 stl	7	5	4	2-5/8 x 5 MB	2-5/8 x 5 MB	15310	7655	3265
BC3 ¹ / ₄ -4	CC3 ¹ / ₄ -4	3 ¹ / ₄	3 ¹ / ₁₆	3/16 stl	11	7	6 ¹ / ₂	4-5/8 x 5 MB	2-5/8 x 5 MB	19250	9625	5745
BC3 ¹ / ₄ -6	CC3 ¹ / ₄ -6	3 ¹ / ₄	5 ¹ / ₂	3/16 stl	11	7	6 ¹ / ₂	4-5/8 x 5 MB	2-5/8 x 7 MB	19250	9625	5745
BC5 ¹ / ₄ -4	CC5 ¹ / ₄ -4	5 ¹ / ₄	3 ¹ / ₁₆	1/4 stl	13	9	8	4-3/4 x 7 MB	2-3/4 x 5 MB	37310	18655	8210
BC5 ¹ / ₄ -6	CC5 ¹ / ₄ -6	5 ¹ / ₄	5 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 7 MB	2-3/4 x 7 MB	37310	18655	8210
BC5 ¹ / ₄ -8	CC5 ¹ / ₄ -8	5 ¹ / ₄	7 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 7 MB	2-3/4 x 9 MB	37310	18655	8210
BC46	CC46	3 ¹ / ₁₆	5 ¹ / ₂	3/16 stl	11	7	6 ¹ / ₂	4-5/8 x 5 MB	2-5/8 x 7 MB	24060	12030	5745
BC48	CC48	3 ¹ / ₁₆	7 ¹ / ₂	3/16 stl	11	9	6 ¹ / ₂	4-5/8 x 5 MB	2-5/8 x 9 MB	24060	12030	5745
BC64	CC64	5 ¹ / ₂	3 ¹ / ₁₆	3/16 stl	11	7	6 ¹ / ₂	4-5/8 x 7 MB	2-5/8 x 5 MB	30250	18905	5745
BC66	CC66	5 ¹ / ₂	5 ¹ / ₂	3/16 stl	11	7	6 ¹ / ₂	4-5/8 x 7 MB	2-5/8 x 7 MB	30250	18905	5745
BC6-7 ¹ / ₂	CC6-7 ¹ / ₂	5 ¹ / ₂	7 ¹ / ₂	3/16 stl	11	9	6 ¹ / ₂	4-5/8 x 7 MB	2-5/8 x 9 MB	30250	18905	5745
BC68	CC68	5 ¹ / ₂	7 ¹ / ₂	3/16 stl	11	9	6 ¹ / ₂	4-5/8 x 7 MB	2-5/8 x 9 MB	30250	18905	5745
BC74	CC74	6 ⁷ / ₈	3 ¹ / ₁₆	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 5 MB	49140	24570	8210
BC76	CC76	6 ⁷ / ₈	5 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 7 MB	49140	24570	8210
BC77	CC77	6 ⁷ / ₈	6 ⁷ / ₈	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	49140	24570	8210
BC78	CC78	6 ⁷ / ₈	7 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	49140	24570	8210
BC7 ¹ / ₂ - 4	CC7 ¹ / ₂ - 4	7 ¹ / ₄	3 ¹ / ₁₆	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 5 MB	49140	18375	8210
BC7 ¹ / ₂ - 6	CC7 ¹ / ₂ - 6	7 ¹ / ₄	5 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 7 MB	49140	28875	8210
BC7 ¹ / ₂ - 7 ¹ / ₂	CC7 ¹ / ₂ - 7 ¹ / ₂	7 ¹ / ₄	7 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	60935	28875	8210
BC86	CC86	7 ¹ / ₂	5 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 7 MB	60935	30460	8210
BC88	CC88	7 ¹ / ₂	7 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 9 MB	2-3/4 x 9 MB	60935	30460	8210
BC96	CC96	8 ⁷ / ₈	5 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 11 MB	2-3/4 x 7 MB	63700	31850	8210
BC98	CC98	8 ⁷ / ₈	7 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 11 MB	2-3/4 x 9 MB	63700	31850	8210
BC106	CC106	9 ¹ / ₂	5 ¹ / ₂	1/4 stl	13	9	8	4-3/4 x 12 MB	2-3/4 x 7 MB	77185	38590	8210

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)				FASTENER SCHEDULE			DESIGN LOAD (LBS)			
		BEAM WIDTH (INCHES)	POST WIDTH (INCHES)	L		H	KC® SUPERSPEED® SDS 1/4 x 2 DRIVE SCREWS		DOWN		UPLIFT	
				BCQ	EBCQ		BEAM	POST	BCQ (100%)	EBCQ (100%)	BCQ (133%)	EBCQ (133%)
BCQ44	CCQ44	3 ¹ / ₁₆	3 ¹ / ₁₆	11	8 ¹ / ₂	7	16	14	24065	18595	5680	4040
BCQ3 ¹ / ₄ -4	CCQ3 ¹ / ₄ -4	3 ¹ / ₄	3 ¹ / ₁₆	11	8 ¹ / ₂	7	16	14	19250	14875	5680	3695
BCQ3 ¹ / ₄ -6	CCQ3 ¹ / ₄ -6	3 ¹ / ₄	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	19250	14875	5680	3695
BCQ5 ¹ / ₄ -4	CCQ5 ¹ / ₄ -4	5 ¹ / ₄	3 ¹ / ₁₆	11	8 ¹ / ₂	7	16	14	31570	24395	5680	4040
BCQ5 ¹ / ₄ -6	CCQ5 ¹ / ₄ -6	5 ¹ / ₄	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	31570	24395	7245	5535
BCQ5 ¹ / ₄ -8	CCQ5 ¹ / ₄ -8	5 ¹ / ₄	7 ¹ / ₂	11	8 ¹ / ₂	7	16	14	31570	24395	7245	5535
BCQ46	CCQ46	3 ¹ / ₁₆	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	24065	18595	7145	4040
BCQ48	CCQ48	3 ¹ / ₁₆	7 ¹ / ₂	11	8 ¹ / ₂	7	16	14	24065	18595	7145	4040
BCQ64	CCQ64	5 ¹ / ₂	3 ¹ / ₁₆	11	8 ¹ / ₂	7	16	14	37815	29220	5680	4040
BCQ66	CCQ66	5 ¹ / ₂	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	37815	29220	7145	4040
BCQ6-7 ¹ / ₂	CCQ6-7 ¹ / ₂	5 ¹ / ₂	7 ¹ / ₂	11	8 ¹ / ₂	7	16	14	37815	29220	7145	4040
BCQ68	CCQ68	5 ¹ / ₂	7 ¹ / ₂	11	8 ¹ / ₂	7	16	14	37815	29220	7145	4040
BCQ74	CCQ74	6 ⁷ / ₈	3 ¹ / ₁₆	11	8 ¹ / ₂	7	16	14	41580	32130	5680	4040
BCQ76	CCQ76	6 ⁷ / ₈	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	41580	32130	7245	5535
BCQ77	CCQ77	6 ⁷ / ₈	6 ⁷ / ₈	11	8 ¹ / ₂	7	16	14	41580	32130	7245	5535
BCQ78	CCQ78	6 ⁷ / ₈	7 ¹ / ₂	11	8 ¹ / ₂	7	16	14	41580	32130	7245	5535
BCQ7 ¹ / ₂ - 4	CCQ7 ¹ / ₂ - 4	7 ¹ / ₄	3 ¹ / ₁₆	11	8 ¹ / ₂	7	16	14	57750	42840	5680	4040
BCQ7 ¹ / ₂ - 6	CCQ7 ¹ / ₂ - 6	7 ¹ / ₄	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	57750	42840	7245	5535
BCQ7 ¹ / ₂ - 7 ¹ / ₈	CCQ7 ¹ / ₂ - 7 ¹ / ₈	7 ¹ / ₄	7 ¹ / ₈	11	8 ¹ / ₂	7	16	14	57750	42840	7245	5535
BCQ86	CCQ86	7 ¹ / ₂	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	51565	39845	7245	5535
BCQ88	CCQ88	7 ¹ / ₂	7 ¹ / ₂	11	8 ¹ / ₂	7	16	14	51565	39845	7245	5535
BCQ96	CCQ96	8 ⁷ / ₈	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	53900	41650	7245	5535
BCQ98	CCQ98	8 ⁷ / ₈	7 ¹ / ₂	11	8 ¹ / ₂	7	16	14	53900	41650	7245	5535
BCQ106	CCQ106	9 ¹ / ₂	5 ¹ / ₂	11	8 ¹ / ₂	7	16	14	65315	50470	7245	5535

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	BEAM WIDTH (INCHES)	POST SIZE	DIMENSIONS (INCHES)			NAIL SCHEDULE			DESIGN LOAD LBS				
				D	L1	L2	A	B	C	UPLIFT SC/ESC (133%)	BEAM UPLIFT		LATERAL	
											SC (133%)	ESC (133%)	SC (133%)	ESC (133%)
SC44	PC44	3 ¹ / ₁₆	4 x 4	2 ³ / ₄	11	7 ³ / ₈	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC44-16	PC44-16	3 ¹ / ₁₆	4 x 4	2 ³ / ₄	11	7 ³ / ₈	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC46	PC46	3 ¹ / ₁₆	4 x 6	2 ³ / ₄	13	9 ¹ / ₄	4-16d	6-16d	4-16d	1500	2250	1500	1125	1500
SC46-16	PC46-16	3 ¹ / ₁₆	4 x 6	2 ³ / ₄	13	9 ¹ / ₄	4-16d	6-16						

POST ANCHORS

HA HEAVY ANCHORS

Design Features . . accommodate heavy column bases and rough-sawn posts, glu-lam timbers or heavy-duty fence construction where high structural values and durable performance are part of the specifications. Anchors should be set in position before pouring concrete. Erection nail holes are provided to speed up installation. These anchors are now available in width of $7\frac{1}{8}$ " for use with **LVL** and **PSL** engineered wood products.

Material . . **HA44** through **HA612**, $\frac{3}{16}$ " steel; **HA7** through **HA1212**, $\frac{1}{4}$ " steel. **HAQ**, 7 ga. galvanized steel. Values have 33½% seismic increase included in the design loads.

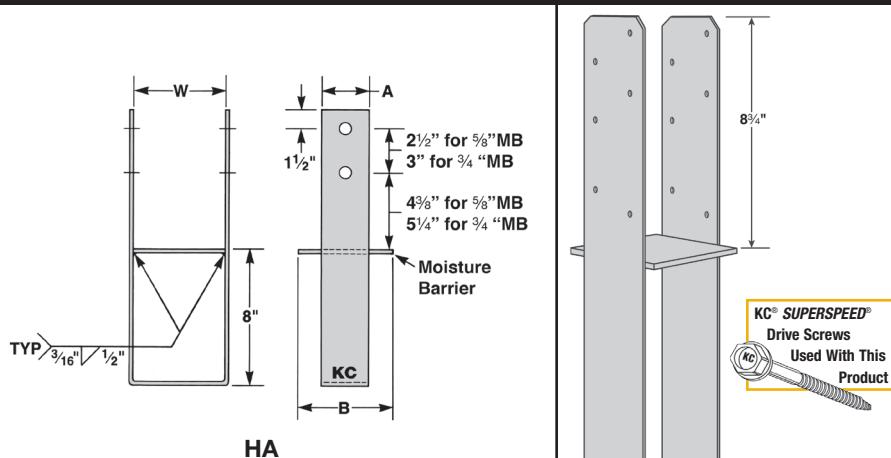
Moisture Barrier Material . . **HA44** through **HA9**, 7 ga. steel. Larger sizes have $\frac{1}{4}$ " moisture bearing.

Finish . . **KC® SUPERSPEED®** gray paint.

Special Finish . . **HA44**, **HA46** and **HA66** galvanized steel.

Ordering/Specifying Information . . to specify screw type use "Q" after regular stock number of **HA**. Example: **HA44** now is **HAQ44**.

KC® SUPERSPEED® Drive Screws (SDS $\frac{1}{4}$ x 2) wood screws (12) included with product.



HAS HEAVY ANCHORS/STAND-OFF

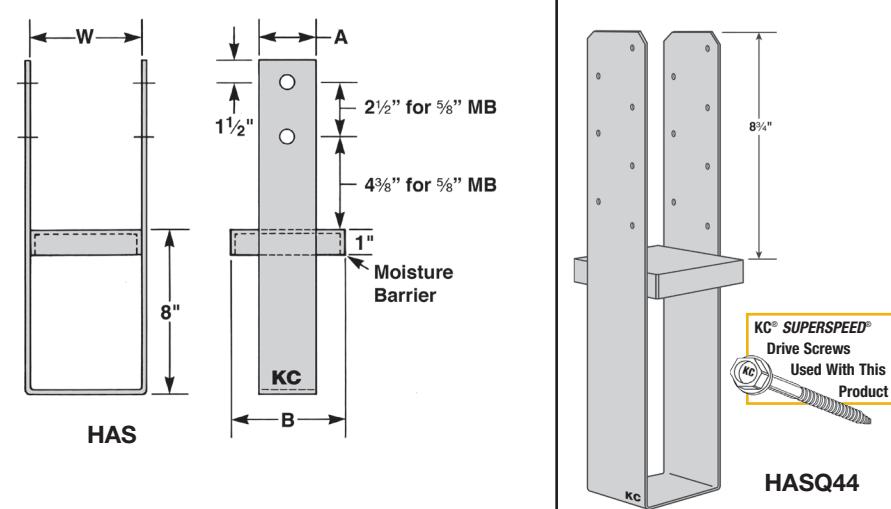
Design Features . . the **HAS** post anchor is very similar to the **HA** heavy anchor (above) except that it is used where a situation or application is needed for sanitation and moisture conditions. This anchor provides the builder with a medium-duty and low cost post anchor that can be embedded into concrete up to 7". The **HAS** also features a moisture-barrier plate that is four-sided. The stand-off plate is located 1" in height above concrete floors or decks when set in concrete. **UBC** requires an off-the-concrete post anchor when they are supporting permanent structures which are exposed to the weather.

Material . . 12 ga. galvanized steel base and 10 ga. galvanized steel strap.

Special . . the **HAS** reduces the potential for decay at post and column ends.

Ordering/Specifying Information . . to specify screw type use "Q" after regular stock number of **HAS**. Example: **HAS44** now is **HASQ44**.

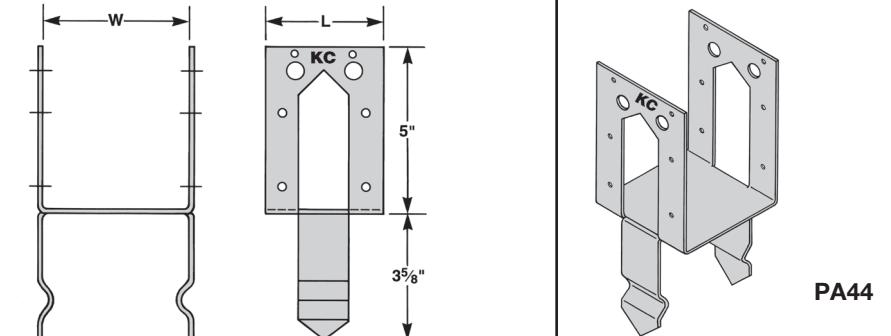
KC® SUPERSPEED® Drive Screws (SDS $\frac{1}{4}$ x 2) wood screws (14) included with product.



PA POST ANCHORS

Design Features . . when placed into wet concrete (after screeding), these post base anchors provide both lateral and uplift resistance – they will not pull out due to offset legs. Pointed ends provide for fast, easy setting and alignment. They also eliminate the need for bolts or other inserts. The seat is flush-mounted to the concrete. The post anchors are also available in rough post sizes.

Material . . 12 ga. galvanized steel.



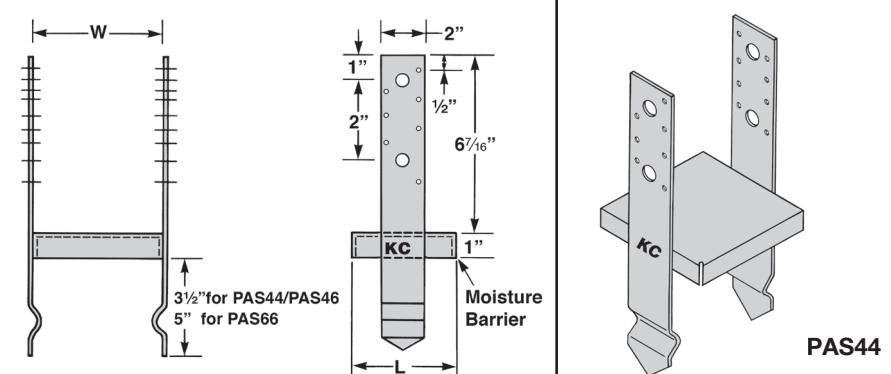
PAS POST ANCHORS/STAND-OFF

Design Features . . the **PAS44** is very similar to the **HAS** heavy anchor stand-off (above) except that it can be embedded into concrete slabs, floor or deck to $4x = 3\frac{1}{2} \times 6x = 5"$. The **PAS** has the same moisture-barrier feature and provides a 1" stand-off plate height.

Material . . 12 ga. galvanized steel base and 12 ga. galvanized steel strap.

Installation . . use 14-16d nails for full load values. For 4x post size, use $2\frac{1}{2}" \times 4\frac{1}{2}"$ MB; for 6x post size, use $2\frac{1}{2}" \times 6\frac{1}{2}"$ MB.

Special . . economical price and ease-of-use make these ideal post anchors for the do-it-yourself market.

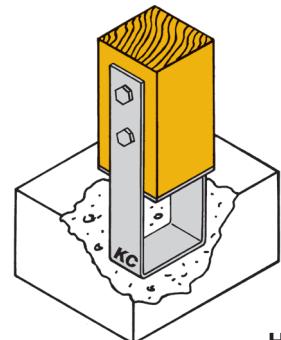


POST ANCHORS

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIAL (INCHES)	DIMENSIONS (INCHES)			KC® SUPERSPEED® DRIVE SCREWS OR BOLT SCHEDULE	DESIGN LOAD UPLIFT (LBS)
				A	B	W		
HA44	CB44	4 x 4	3 ¹³ / ₁₆ stl	2	3 ¹³ / ₁₆	3 ¹³ / ₁₆	2- ⁵ / ₈ x 5 MB	5745
HA46	CB46	4 x 6	3 ¹³ / ₁₆ stl	2	5 ¹ / ₂	3 ¹³ / ₁₆	2- ⁵ / ₈ x 5 MB	5745
HA48	CB48	4 x 8	3 ¹³ / ₁₆ stl	2	7 ¹ / ₂	3 ¹³ / ₁₆	2- ⁵ / ₈ x 5 MB	5745
HA5	CB5	5 ¹ / ₂	3 ¹³ / ₁₆ stl	2 ¹ / ₂	Specify	5 ¹ / ₄	2- ⁵ / ₈ x 6 MB	5745
HA66	CB66	6 x 6	3 ¹³ / ₁₆ stl	2 ¹ / ₂	5 ¹ / ₂	5 ¹ / ₂	2- ⁵ / ₈ x 7 MB	5745
HA68	CB68	6 x 8	3 ¹³ / ₁₆ stl	2 ¹ / ₂	7 ¹ / ₂	5 ¹ / ₂	2- ⁵ / ₈ x 7 MB	5745
HA7	CB7	6 ³ / ₄	1/4 stl	2 ¹ / ₂	Specify	6 ³ / ₈	2- ⁵ / ₈ x 7 MB	8345
HA7 ¹ / ₈ - 4	CB7 ¹ / ₈ - 4	7 ¹ / ₈ x 4	1/4 stl	2 ¹ / ₂	3 ¹³ / ₁₆	7 ¹ / ₄	2- ³ / ₄ x 9 MB	6650
HA7 ¹ / ₈ - 6	CB7 ¹ / ₈ - 6	7 ¹ / ₈ x 6	1/4 stl	2 ¹ / ₂	5 ¹ / ₂	7 ¹ / ₄	2- ³ / ₄ x 9 MB	6650
HA7 ¹ / ₈ - 7	CB7 ¹ / ₈ - 8	8 ¹ / ₈ x 8	1/4 stl	2 ¹ / ₂	7	7 ¹ / ₄	2- ³ / ₄ x 9 MB	6650
HA86	CB86	8 x 6	1/4 stl	2 ¹ / ₂	5 ¹ / ₂	7 ¹ / ₂	2- ³ / ₄ x 9 MB	8345
HA88	CB88	8 x 8	1/4 stl	2 ¹ / ₂	7 ¹ / ₂	7 ¹ / ₂	2- ³ / ₄ x 9 MB	8345
HA9	CB9	8 ³ / ₄	1/4 stl	2 ¹ / ₂	Specify	8 ³ / ₈	2- ³ / ₄ x 11 MB	8345
HA1010	CB1010	10 x 10	1/4 stl	2 ¹ / ₂	9 ¹ / ₂	9 ¹ / ₂	2- ³ / ₄ x 11 MB	8345
HA1012	CB1012	10 x 12	1/4 stl	2 ¹ / ₂	11 ¹ / ₂	9 ¹ / ₂	2- ³ / ₄ x 11 MB	8345
HA1212	CB1212	12 x 12	1/4 stl	2 ¹ / ₂	11 ¹ / ₂	11 ¹ / ₂	2- ³ / ₄ x 13 MB	8345
HAQ44	CBQ44	4 x 4	3 ¹³ / ₁₆ stl	2	3 ¹³ / ₁₆	3 ¹³ / ₁₆	12-SDS 1/4 x 2	5125
HAQ46	CBQ46	4 x 6	3 ¹³ / ₁₆ stl	2	5 ¹ / ₂	3 ¹³ / ₁₆	12-SDS 1/4 x 2	5125
HAQ66	CBQ66	6 x 6	3 ¹³ / ₁₆ stl	2	5 ¹ / ₂	5 ¹ / ₂	12-SDS 1/4 x 2	5125

HA
HAQ

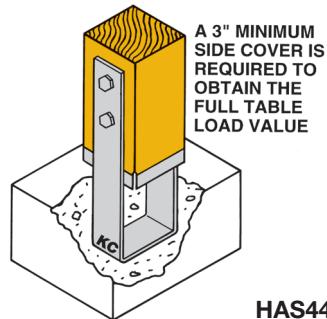


HA44

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			KC® SUPERSPEED® DRIVE SCREWS OR BOLT SCHEDULE	DESIGN LOAD
				A	B	W		
HAS44	CBS44	4 x 4	10 ga gal	2	3 ¹³ / ₁₆	3 ¹³ / ₁₆	2- ⁵ / ₈ x 5 MB	5665
HAS46	CBS46	4 x 6	10 ga gal	2	5 ¹ / ₂	3 ¹³ / ₁₆	2- ⁵ / ₈ x 5 MB	5665
HAS66	CBS66	6 x 6	10 ga gal	2	5 ¹ / ₂	5 ¹ / ₂	2- ⁵ / ₈ x 7 MB	5665
HASQ44	CBSQ44	4 x 4	10 ga gal	2	3 ¹³ / ₁₆	3 ¹³ / ₁₆	14-SDS 1/4 x 2	5665
HASQ46	CBSQ46	4 x 6	10 ga gal	2	5 ¹ / ₂	3 ¹³ / ₁₆	14-SDS 1/4 x 2	5665
HASQ66	CBSQ66	6 x 6	10 ga gal	2	5 ¹ / ₂	5 ¹ / ₂	14-SDS 1/4 x 2	5665

HAS
HASQ

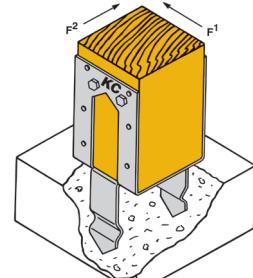


HAS44

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	DIMENSIONS (INCHES)		NAIL SCHEDULE	BOLT SCHEDULE (INCHES)	DESIGN LOAD (LBS)		
			W	L			UPLIFT (133%)	F1 (133%)	F2 (133%)
PA44	PB44	4 x 4	3 ¹³ / ₁₆	3	12-16d	2-1/2 x 5 MB	2300	1725	2240
PA46	PB46	4 x 6	5 ¹ / ₂	3	12-16d	2-1/2 x 7 MB	2300	1725	2240
PA66	PB66	6 x 6	5 ¹ / ₂	5	12-16d	2-1/2 x 7 MB	2300	1725	2240
PA44R	PB44R	Rough 4 x 4	4	3	12-16d	2-1/2 x 5 MB	2300	1725	2240
PA46R	PB46R	Rough 4 x 6	6	3	12-16d	2-1/2 x 7 MB	2300	1725	2240
PA66R	PB66R	Rough 6 x 6	6	5	12-16d	2-1/2 x 7 MB	2300	1725	2240

PA

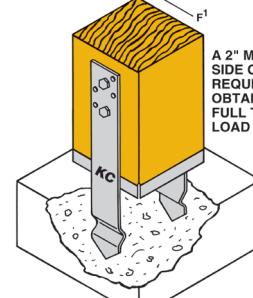


PA44

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	DIMENSIONS (INCHES)		DESIGN LOAD (LBS)			
					UPLIFT (160%)		F1 (160%)	
			W	L	NAILS	BOLTS	NAILS	BOLTS
PAS44	PBS44	4 x 4	3 ¹³ / ₁₆	3 ¹³ / ₁₆	2400	2400	1165	230
PAS46	PBS46	4 x 6	3 ¹³ / ₁₆	5 ¹ / ₂	2400	2400	1165	360
PAS66	PBS66	6 x 6	5 ¹ / ₂	5 ¹ / ₂	3160	4000	1865	570
							11655	

PAS

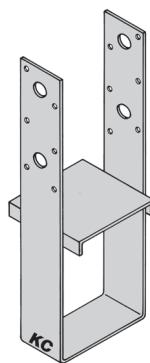
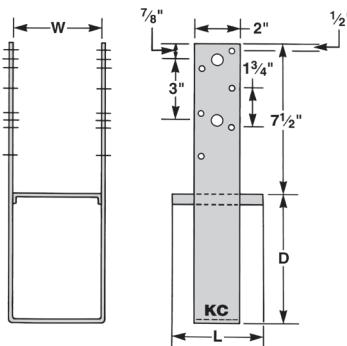


PAS44

PAM POST ANCHORS MEDIUM

Design Features . . are similar to the **HA** heavy anchor (previous page), and provide builders with a medium-duty, low cost post anchor that can be embedded into concrete up to 7" to meet the needs of carports, patios, porches and breezeways. Moisture-barrier plate can be removed for added installation flexibility. The post can be nailed or bolted to meet code requirements.

Material . . **PAM**, 12 ga. galvanized steel.



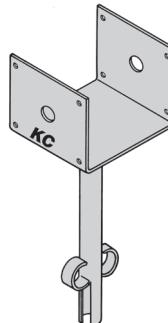
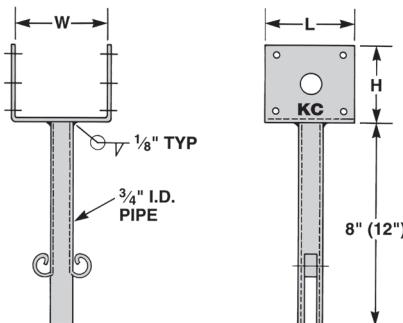
PAM44

EA ELEVATED ANCHORS

Design Features . . provide an economical, elevated post base for applications where sanitation and moisture conditions dictate an off-the-concrete post anchor. Anchors should be embedded in fresh concrete immediately after screeding with the post seat not exceeding 3" above the concrete. The $\frac{3}{4}$ " I. D. pipe has anti-rotation and a withdrawal lock at the base. The standard depth is 8". To special order the 12", specify by adding 12 after the stock no. (example: **EA44** with 12" pipe, specify as **EA44-12**).

Material . . 12 ga. steel.

Finish . . **KC® SUPERSPEED®** gray paint.



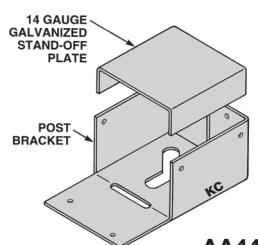
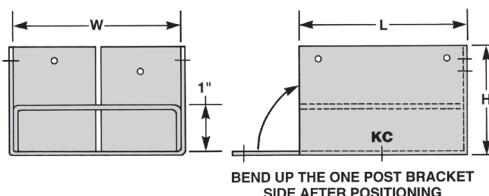
EA44

AA ADJUSTABLE ANCHORS

Design Features . . provide fully-adjustable post base plus moisture and sanitary protection . . also used for new construction or remodeling applications where damp rot is a problem. Bending slot provides greater ease of installation. For an easy adjustment to a previously set $\frac{1}{2}$ " concrete fastener (or bolt and cement insert), use the slotted hole. Also available in rough post sizes.

Material . . 18 ga. and 16 ga. galvanized steel with a 14 ga. galvanized stand-off plate.

Special . . stand-off plate provides flat-end bearing area for posts and keeps the post end $1\frac{1}{16}$ " above the surface moisture.

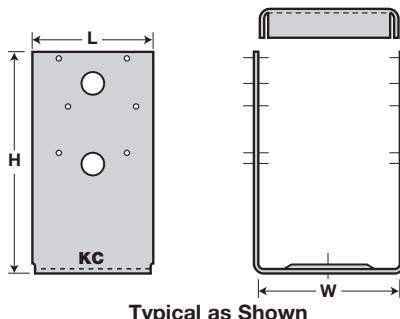


AA44

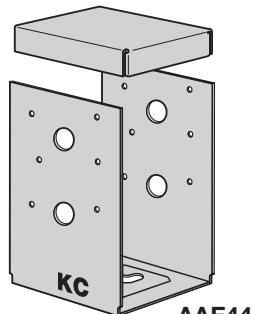
AAEL ADJUSTABLE ANCHORS/ECONOMY

Design Features . . the **AAEL** is very similar to the **AA** adjustable anchor (above) except for the added feature of a four-sided stand-off plate that increases the down-load support and provides an attractive appearance while meeting the code-required 1" stand-off. The **AAE44L** provides higher uplift capacity because of extended sides with extra bolts and nailing schedules. The **AAEL** anchors are also available in rough lumber sizes.

Material . . 16 ga. and 12 ga. galvanized steel with a 12 ga. galvanized stand-off plate.



Typical as Shown



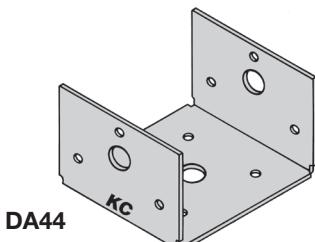
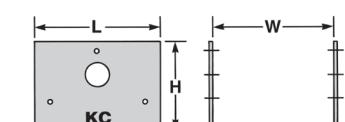
AAE44L

DA DECK ANCHORS/STAND-OFF

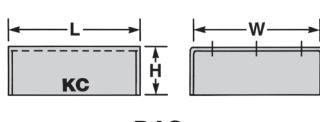
Design Features . . the **DA** eliminates toenailing of the post or column to a flat surface. The bottom plate $\frac{1}{2}$ " bolt hole can be set to concrete with a $\frac{1}{2}$ " bolt, cement nails or "gun" inserts. The **DAS** is available in rough post sizes. The **DAS** stand-off is used to lessen post decay at concrete or masonry floors.

Material . . **DA**, 18 ga. galvanized steel; **DAS**, 10 ga. galvanized steel.

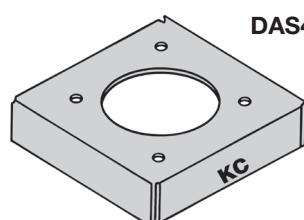
Special . . The **DAS** is available in rough lumber sizes. It can be attached with nails before post installation.



DA44

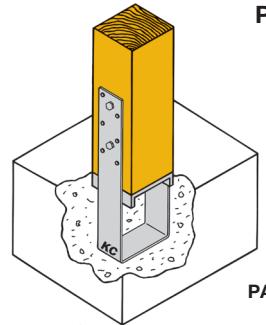


DAS



DAS4

PAM



PAM

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	BOLT SCHEDULE (INCHES)	DESIGN LOAD (LBS)	
				D	W	L			NAILS	BOLTS
PAM44	LCB44	4 x 4	12 ga gal	6½	3½	3½	12-16d	2-½ x 4½ MB	2300	3625
PAM46	LCB46	4 x 6	12 ga gal	6½	3½	5½	12-16d	2-½ x 4½ MB	2300	3625
PAM66	LCB66	6 x 6	12 ga gal	5½	5½	5½	12-16d	2-½ x 6½ MB	2300	3625
PAM44R	—	4 x 4	12 ga gal	6½	4	4	12-16d	2-½ x 4½ MB	2300	3625
PAM46R	—	4 x 6	12 ga gal	6½	4	6	12-16d	2-½ x 4½ MB	2300	3625
PAM66R	—	6 x 6	12 ga gal	5½	6	6	12-16d	2-½ x 6½ MB	2300	3625

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE	BOLT SCHEDULE	DESIGN LOAD (LBS)			
		W	H	L			UPLIFT (133%)	F ¹ (133%)	F ² (133%)	DOWN (100%)
EA44	EPB44	3½	2¼	3	8-16d	1-½ x 4½ MB	1535	1150	1150	3465
EA46	EPB46	5½	3	3	8-16d	1-½ x 6½ MB	1535	1150	1150	3465
EA66	EPB66	5½	3	5	12-16d	1-½ x 6½ MB	2300	1725	1725	3465
EA44-12	EPB44-12	3½	2¼	3	8-16d	1-½ x 4½ MB	1535	1150	1150	3465
EA46-12	EPB46-12	5½	3	3	8-16d	1-½ x 6½ MB	1535	1150	1150	3465
EA66-12	EPB66-12	5½	3	5	12-16d	1-½ x 6½ MB	2300	1725	1725	3465

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD		
				L	W	H		UPLIFT LBS	LATERAL LBS	DOWN LBS
AA44	AB44	4 x 4	18 ga gal	3½	3½	2¾	8-10d	1195	590	4165
AA46	AB46	4 x 6	16 ga gal	5½	3½	2¾	10-10d	1505	755	6165
AA66	AB66	6 x 6	16 ga gal	5½	5½	2¾	12-10d	1810	905	11665
AA44R	AB44R	Rough 4 x 4	16 ga gal	4	4	2¾	8-10d	1195	590	4165
AA46R	AB46R	Rough 4 x 6	16 ga gal	6	4	2¾	10-10d	1505	755	6165
AA66R	AB66R	Rough 6 x 6	16 ga gal	6	6	2¾	12-10d	1810	905	11665

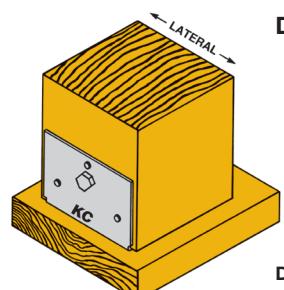
For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIAL		DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD	
			BASE	STRAP	L	W	H		UPLIFT LBS	DOWN LBS
AAE44L	ABU44	4 x 4	12 ga gal	12 ga gal	3	3½	5½	12-16d	2290	6665
AAE46L	ABU46	4 x 6	12 ga gal	12 ga gal	5	3½	7	12-16d	2290	10335
AAE66L	ABU66	6 x 6	12 ga gal	12 ga gal	5	5½	6	12-16d	2290	15000
AAE88L	ABU88	8 x 8	14 ga gal	12 ga gal	7	7½	7	18-16d	2290	15870

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD	
				L	W	H		UPLIFT LBS	LATERAL LBS
DA44	BC40	4 x 4	18 ga gal	3	3½	2¾	10-16d	535	535
DA46	BC460	4 x 6	18 ga gal	3	5½	2¾	12-16d	535	535
DA66	BC60	6 x 6	18 ga gal	5	5½	2¾	16-16d	535	535
DA88	BC80	8 x 8	18 ga gal	7	7½	2¾	16-16d	535	535
KC® STK NO	REF NO	POST SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD	
KC® STK NO	REF NO	POST SIZE	MATERIAL	L	W	H	UPLIFT LBS	DOWN LBS	LATERAL LBS
				3½	3½	1			
DAS4	APS4	4 x 4	10 ga gal	3½	3½	1	—	—	900
DAS5	APS5	5 x 5	10 ga gal	4½	4½	1	—	—	1200
DAS6	APS6	6 x 6	10 ga gal	5½	5½	1	—	—	1300
DAS8	APS8	8 x 8	10 ga gal	8	8	1½	—	—	3000
DAS10	APS10	10 x 10	10 ga gal	9½	9½	1½	—	—	3800
DAS12	APS12	12 x 12	10 ga gal	11½	11½	1½	—	—	4800

DA DAS



DA44

ANCHORS AND CLIPS (Wood-To-Wood)

FA3

FRAMING ANCHORS

FA6

Design Features . . . FA6 anchors provide the builder with the industry's most versatile framing anchor including:

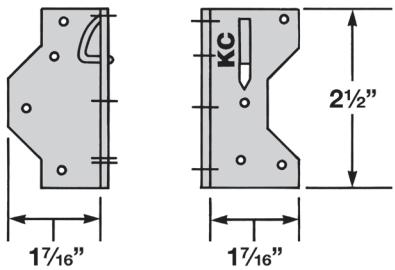
- Prongs – permit faster and easier installation.
- Bending slots – make accurate bends for all 2- and 3-way anchoring ties on the job.

FA3 anchors have been designed especially for use on 2 x 4, 2 x 3 and 3 x 4 framing.

Material . . . 18 and 20 ga. galvanized steel.

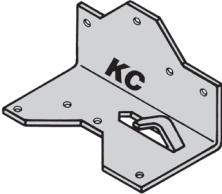
Loads . . . (shown with directional arrow) are normal with 25% increase for maximum, and are based on laboratory tests.

Special . . . the FAL and FAL5 anchor provides a plate to transfer the shear force to the blocking connection or rim joist from the top plate. The improved nail pattern helps prevent splitting of the wood members for both single/double top plate situations.

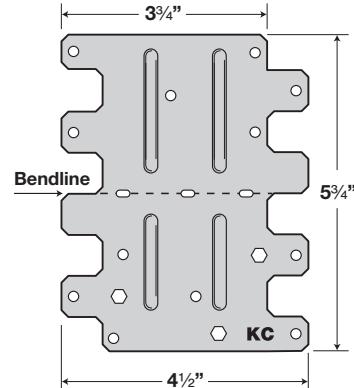
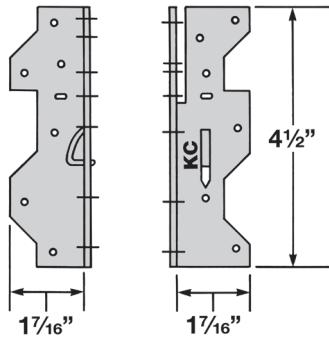
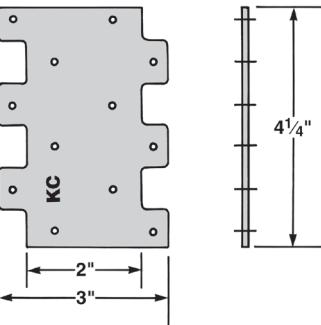


FA3

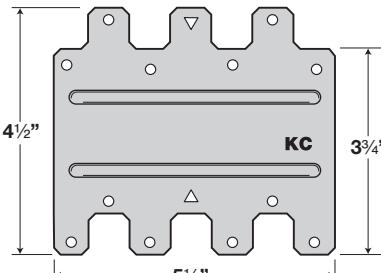
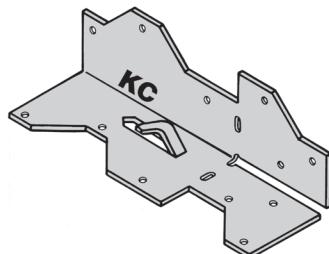
FA6



FAL



FALW



FAL5

CA

CLIP ANCHORS/SKewed

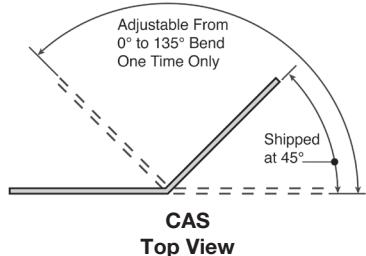
CAS

Design Features . . . CA versatile reinforcing angles for a multi-purpose anchor around the job. These are generically known as TECO™ clips. They can be nailed to concrete slabs to hold posts or studs, or for high uplift conditions. Holes are staggered to eliminate wood splitting and to permit installation on both sides of the timber. The CAS is a clip anchor that can be field skewed from 0° to 135°. (Holes are slotted)

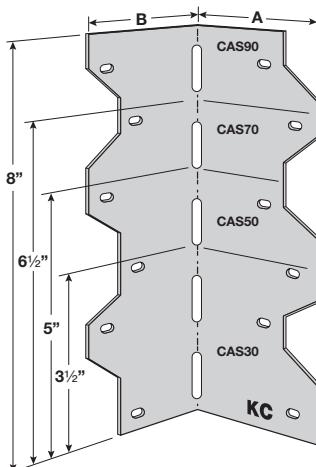
Lengths . . . CA, CAS – 2 1/2", 4 1/2", 6 1/2" and 8 1/2".

Material . . . 18 ga. galvanized steel.

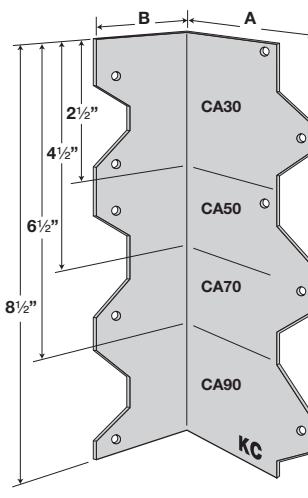
TOP VIEW



**CAS
Top View**



CAS

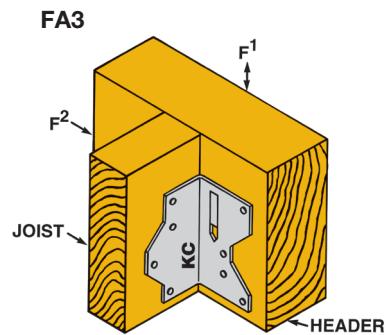


CA

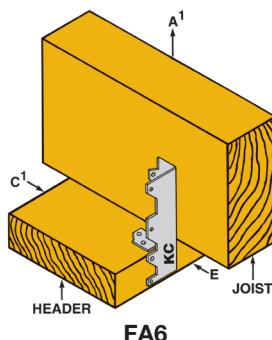
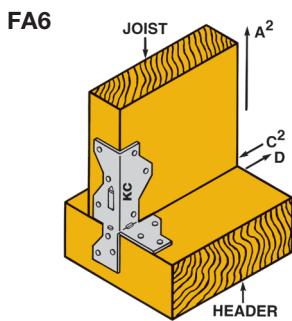
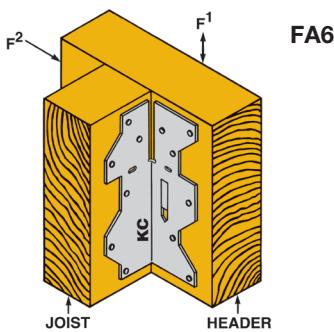
ANCHORS AND CLIPS (WOOD-TO-WOOD)

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

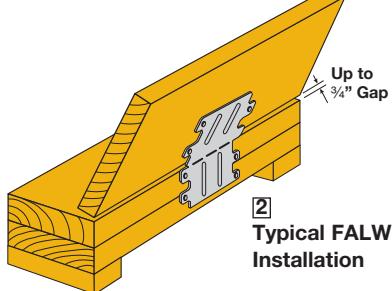
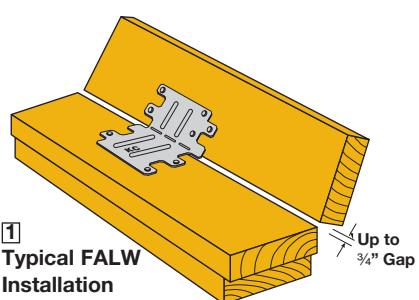
KC® STK NO	REF NO	MATERIAL	NAIL SCHEDULE	DIRECTION OF LOAD	DESIGN LOAD	
					NORMAL LBS	MAX LBS
FA3	A34	18 ga gal	8-8d	F ¹	355	455
				F ²	355	455
				A ¹ , E	265	335
				C ¹	265	335
				A ²	265	335
				C ²	265	335
				D	265	355
				F ¹	535	670
FA6	A35	18 ga gal	12-8d	F ²	535	670
				G	535	670
				H	445	445
				J	265	265
				G	535	670
				H	445	445
				J	265	265
				1 45° to 90°	445	445
FAL	LTP4	20 ga gal	12-8d	2 0° to 45°	490	490
FAL5	LTP5	20 ga gal	12-8d			
FALW	RBC	20 ga gal	12-10d x 1½	1 45° to 90°	445	445
				2 0° to 45°	490	490



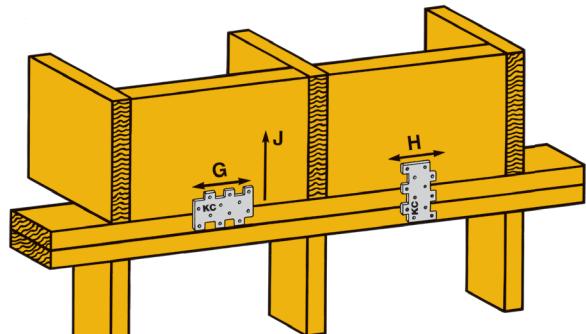
FA3
FA6
FAL
FALW



1 Typical FALW Installation



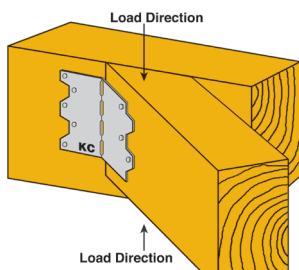
2 Typical FALW Installation



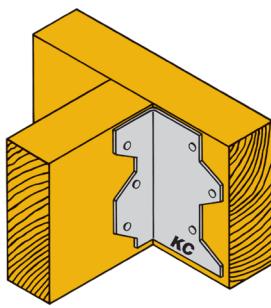
FAL
FAL5

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD	
			A	B	L		NORMAL LBS	MAX LBS
CA30	L30	18 ga gal	2 5/8	1 3/8	2 1/2	4-10d	220	275
CA50	L50	18 ga gal	2 5/8	1 3/8	4 1/2	6-10d	330	445
CA70	L70	18 ga gal	2 5/8	1 3/8	6 1/2	8-10d	440	565
CA90	L90	18 ga gal	2 5/8	1 3/8	8 1/2	10-10d	550	740
CAS30	LS30	18 ga gal	2 5/8	2 3/8	3 1/2	6-10d	355	415
CAS50	LS50	18 ga gal	2 5/8	2 3/8	5	8-10d	475	730
CAS70	LS70	18 ga gal	2 5/8	2 3/8	6 1/2	10-10d	595	915
CAS90	LS90	18 ga gal	2 5/8	2 3/8	8	12-10d	715	1040



Load Direction



CA50

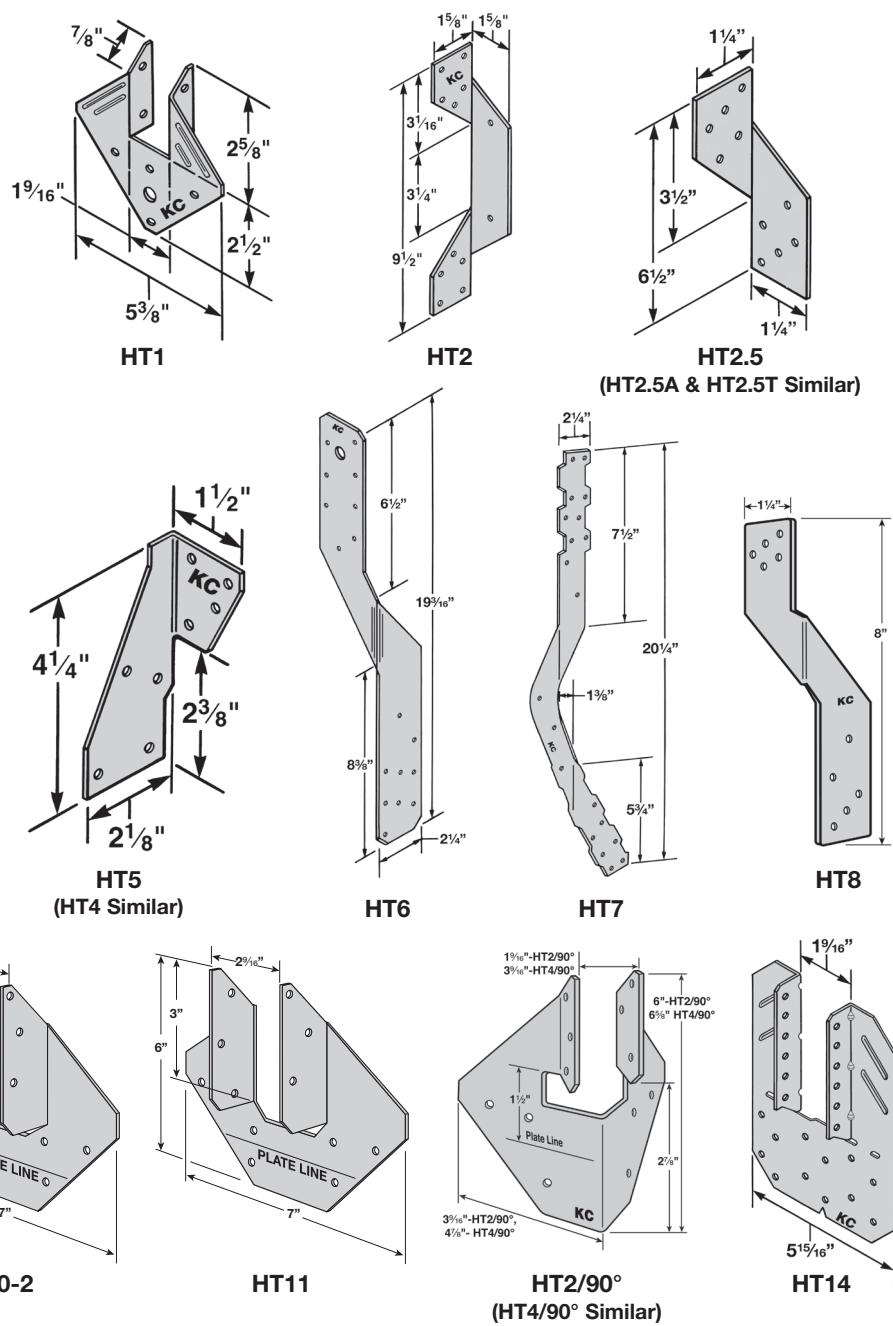
CA
CAS

HT HURRICANE TIES

Design Features . . . eliminate expensive, time consuming rafter notching . . . provide wind and seismic ties for trusses and rafters . . . fulfill specifications for resistance to lateral and uplift conditions . . . also for general purpose tie use, strongback or attachments where one member crosses another . . . **HT2.5T** is designed for tying rafter or truss to the top of two plates. The eighteen design configurations include:

- (1) **HT1, HT10, HT10R, HT10-2, HT11, and HT14** are one direction. The **HT10-2** attaches a 2-ply rafter or a ceiling joist and rafter to the top plate.
 - (2) **HT2 – combination.**
 - (3, 4) **HT3, HT2.5** and **HT2.5T** – manufactured in pairs for right and left hand use.
 - (5, 6) **HT4** and **HT5** – a new design that provides higher allowable loads and requires fewer nails. The new hurricane ties allow for installation on the inside of the member without interfering with the sheet rock, or for installation on the outside of the member without interfering with the sheathing material. The **HT5** is designed to tie the top of two wall plates to the rafter.
 - (7) **HT6, HT7** and **HT8** – the largest of all hurricane ties, made from heavy 16 and 18 ga. galvanized steel for high load capacity, and used to tie joists, studs, trusses, plates and all other wood members.
 - (8) **HT2/90°** and **HT4/90°** – these ties connect the joist or rafter to a double top plate at a 45° angle. Manufactured sizes allow for both 2x and 4x conditions. After attaching the **HT2/90°** or **HT4/90°** to a double top plate, install the rafter at any slope up to 45° and finish nailing.

Material . . 18 qa. and 16 qa. galvanized steel.



TC TRUSS CLIPS

TCL **TCD** **TCH** Design Features . . . permit easy, fast tying of trusses to non-load-bearing walls. Vertical slotted hole allows vertical movement for quick and simple truss seating under a full, dead load condition.

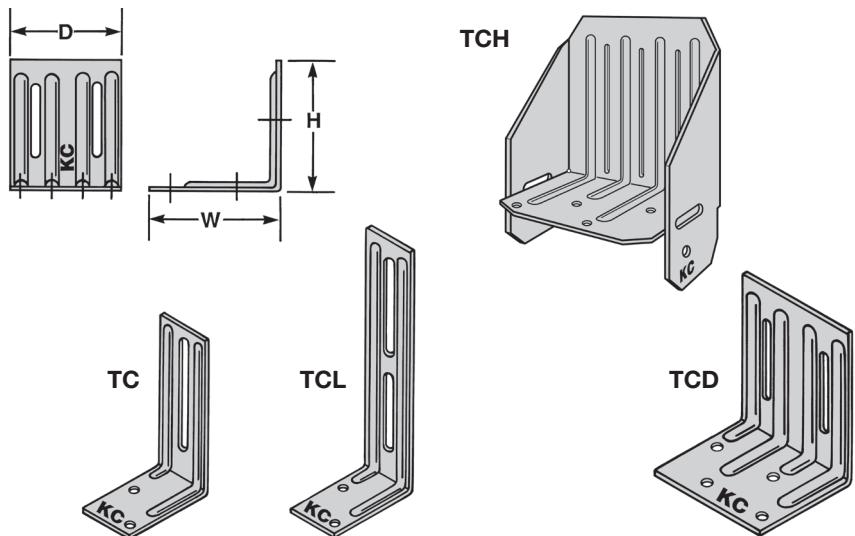
Material . . 18 ga. galvanized steel.

Installation . . TC -2 nails to plate, 1 into slot.

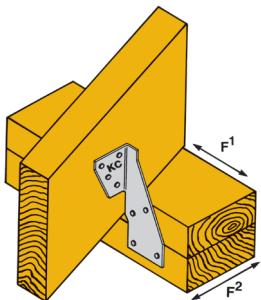
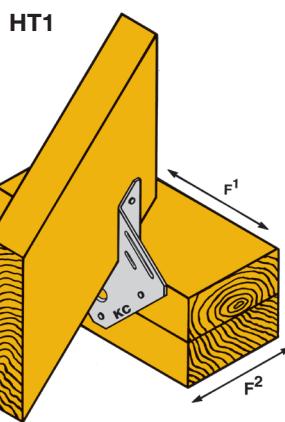
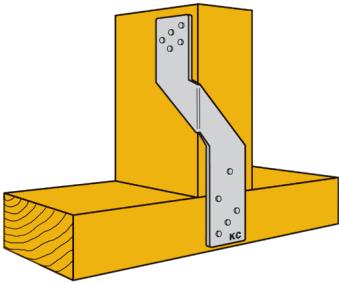
TCL – 2 nails to plate, 1 into slot.

TCD – 4 nails to plate, 2 into slots.
TCL is used when a longer leg is needed to reach a truss or rafter because of separation from a non-bearing top plate. Lower truss chord can be attached to either side of the upstanding leg. Nails must be installed at the middle of the slot.

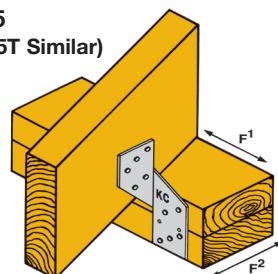
TCH – has a 2 1/8" slot to accommodate the movement of commercial trusses for high lateral capacity.



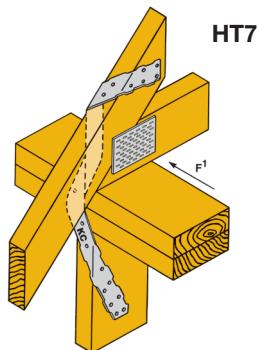
KC® STK NO	REF NO	MATERIAL	NAIL SCHEDULE			DESIGN LOAD (LBS)		
			RAFTER	PLATES	STUD	UPLIFT (160%)	LATERAL	
F1 (160%)	F2 (160%)							
HT1	H1	18 ga gal	6-8d x 1½	4-8d	—	585	490	170
HT2A	H2A	18 ga gal	5-8d x 1½	2-8d x 1½	5-8d x 1½	595	140	65
HT2/90°	HCP2	18 ga gal	6-10d x 1½	6-10d x 1½	—	645	315	—
HT2.5	H2.5	18 ga gal	5-8d	5-8d	—	475	170	170
HT2.5A	H2.5A	18 ga gal	5-8d	5-8d	—	600	110	110
HT2.5T	H2.5T	18 ga gal	5-8d	5-8d	—	615	170	170
HT3	H3	18 ga gal	4-8d	4-8d	—	475	170	170
HT4	H4	18 ga gal	4-8d	4-8d	—	365	170	170
HT4/90°	HCP4	18 ga gal	8-10d	8-10d	—	1005	315	—
HT5	H5	18 ga gal	4-8d	4-8d	—	475	130	170
HT6	H6	16 ga gal	—	8-8d	8-8d	955	715	—
HT7	H7	16 ga gal	4-8d	2-8d	8-8d	990	475	—
HT8	H8	18 ga gal	5-10d x 1½	5-10d x 1½	—	745	—	—
HT10A	H10A	18 ga gal	9-8d x 1½	9-8d x 1½	—	1015	590	525
HT10R	H10R	18 ga gal	8-8d x 1½	8-8d x 1½	—	1000	590	525
HT10-2	H10-2	18 ga gal	6-10d	6-10d	—	760	590	430
HT11	H11Z	18 ga gal	6-16d x 2½	6-16d x 2½	—	850	590	775
HT14	H14	18 ga gal	12-8d x 1½	13 x 8d	—	1375	530	270
			12-8d x 1½	15 x 8d	—	1375	530	270

HT5
(HT4 Similar)

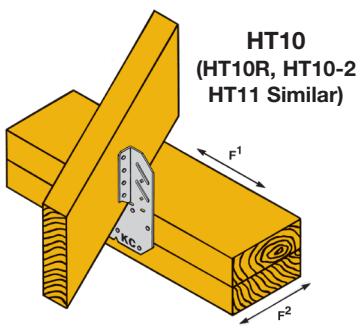
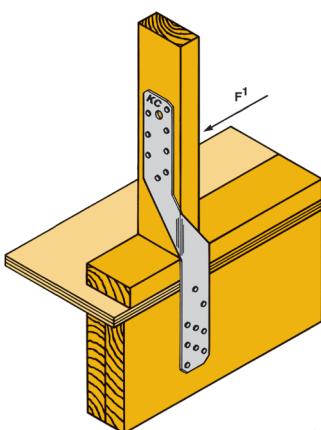
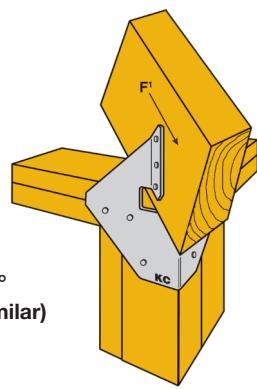
HT8

HT2.5
(HT2.5A & HT2.5T Similar)

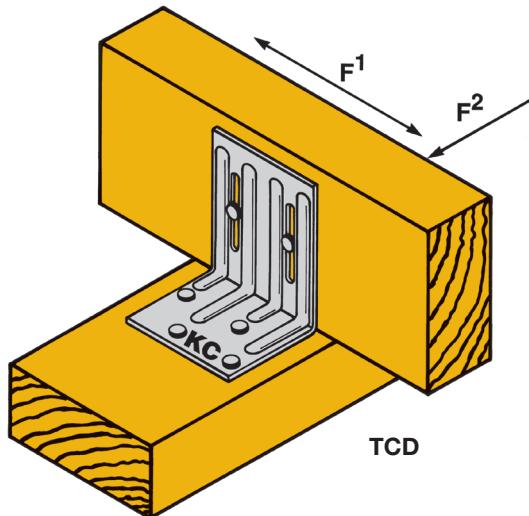
HT6



HT7

HT10
(HT10R, HT10-2
HT11 Similar)HT2/90°
(HT4/90° Similar)For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)			NAIL SCHEDULE		DESIGN LOAD (LBS) MAX (133%)			
		D	W	H	TRUSS	PLATE	WITHOUT GAP		WITH GAP	
							F1	F2	F1	F2
TC	STC	1¼	1⅛	2¾	1-8d	2-8d	85	55	40	40
TCL	STCT	1¼	1⅛	4¼	1-8d	2-8d	—	—	—	—
TCD	DTC	2½	1¼	2¾	2-8d	4-8d	215	215	110	110
TCH	HTC4	3⁹/₁₆	2	3½	3-10d	6-10d	395	315	100	315

TC
TCL
TCD
TCH

ANGLES AND BRACES

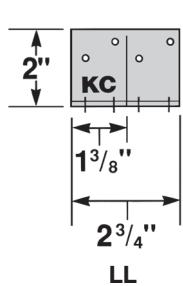
LL

LIGHT ANGLES/MEDIUM ANGLES

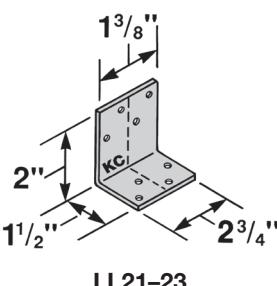
Design Features . . MLs provide fast, accurate bolting of two intersecting wood members (reinforcing intersection joints). LLs are versatile reinforcing angles that are nailed to reinforce intersecting wood members.

Material . . 18 ga. galvanized and 12 ga. galvanized steel, depending upon size and load requirements.

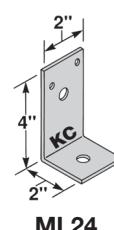
Special . . medium angles are designed for standardization and construction economies, and to provide compatibility with the KC® SUPERSPEED® structural hardware line.



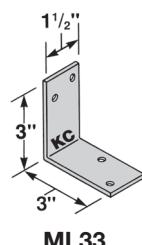
LL



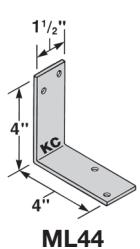
ML21-23



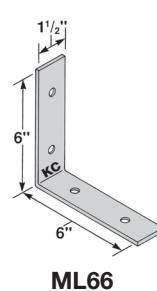
ML24



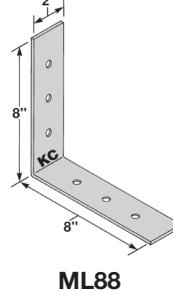
ML33



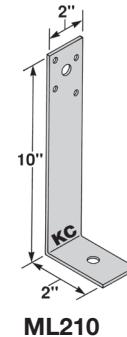
ML44



ML66



ML88



ML210

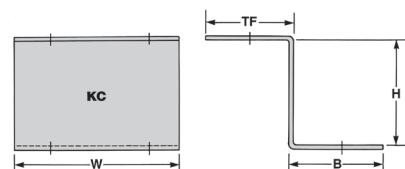
ZH

"Z" HANGERS (CLIPS)

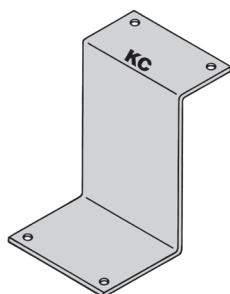
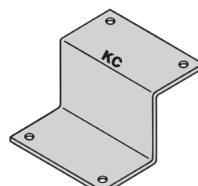
Design Features . . ZH24 hangers are used for flat-blocking between joists or trusses to complete diaphragm nailing. ZH241, ZH261 and ZH44 hangers are used to support joists when they are skewed to eliminate toe-nailing for faster installation. They require fewer nails.

Material . . 28 ga., 18 ga., and 12 ga. galvanized steel.

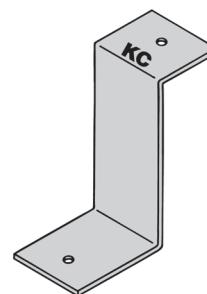
Special . . ZH2428 and ZH3428 hangers are made from 28 ga. galvanized steel. For installation savings, the ZHs are normally nailed or stapled to the stiffeners (joist) first and then used for flat-blocking between the joists or trusses to complete diaphragm nailing.



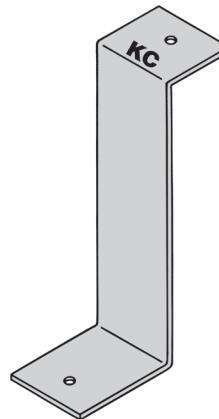
ZH24



ZH44



ZH241



ZH261

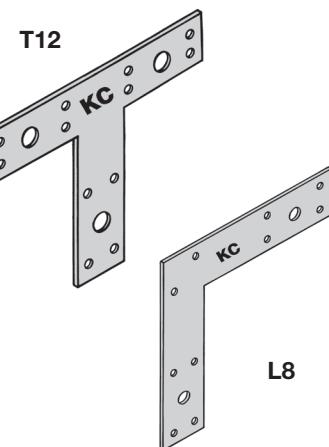
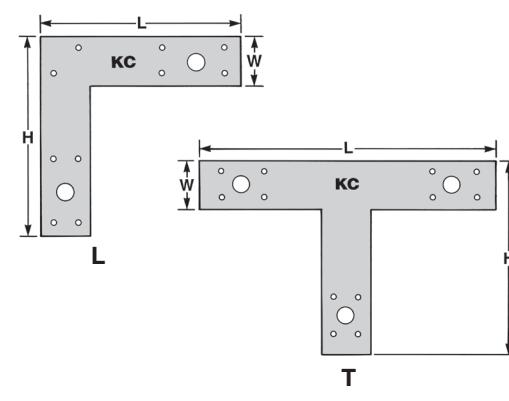
T

"L"/"T" BRACES

Design Features . . inexpensive braces are ideal for gates, patios covers, joining posts and columns to headers, beams and other applications where added reinforcement is needed. Braces may be bolted for heavy-duty applications.

Material . . light and medium-duty use, 14 ga. galvanized steel; heavy-duty use, $\frac{3}{16}$ steel.

Finish . . TH and LH KC® SUPERSPEED® gray paint.

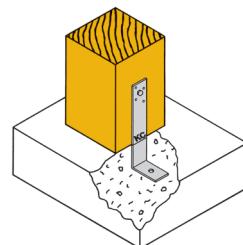
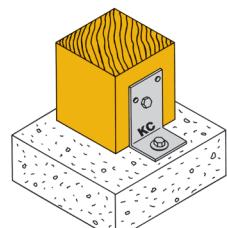


ANGLES AND BRACES

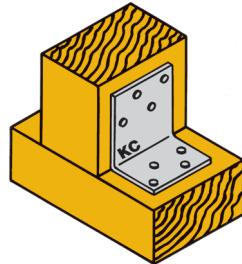
www.kcmetals.com

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

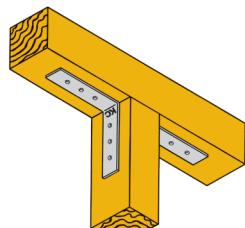
KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)			NAIL AND BOLT SCHEDULE	DESIGN LOAD	
			L1	L2	W		PARALLEL TO GRAIN LBS	PERPENDICULAR TO GRAIN LBS
LL21	A21	18 ga gal	1½	2	1¾	4-10d	250	250
LL23	A23	18 ga gal	1½	2	2¼	8-10d	505	505
ML33	A33	12 ga gal	3	3	1½	8-10d	650	345
ML44	A44	12 ga gal	4	4	1½	8-10d	650	345
ML66	A66	12 ga gal	6	6	1½	4-¾ MB	—	—
ML88	A88	12 ga gal	8	8	2	6-¾ MB	—	—
ML24	A24	12 ga gal	2	4	2	2-½ MB	—	—
ML210	A311	12 ga gal	2	10	2	2-½ MB	—	—



ML24



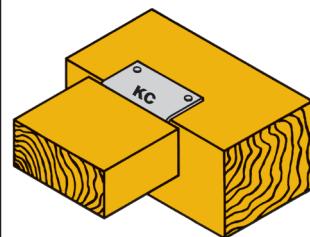
LL23



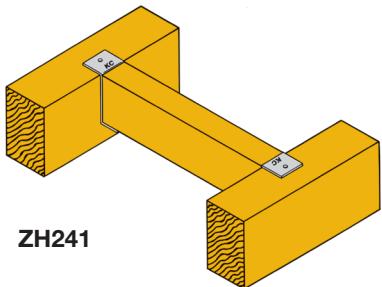
ML88

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

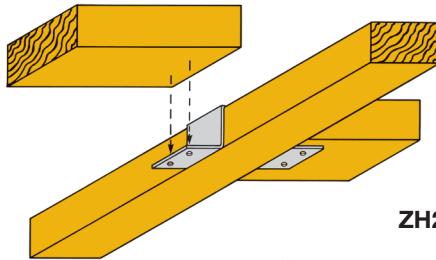
KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)				NAIL SCHEDULE		DESIGN LOAD LBS
			B	W	H	TF	BLOCKING	JOIST	
ZH24	Z2	18 ga gal	1¾	2½	1¾	1¾	2-10d	2-10d	—
ZH241	Z4	12 ga gal	2	1½	3¾	1¾	1-16d	1-16d	545
ZH261	Z6	12 ga gal	2	1½	5¾	1¾	1-16d	1-16d	545
ZH44	Z44	12 ga gal	2	2¾	3¾	1¾	2-10d	2-10d	415
ZH2428	Z28	28 ga gal	1¾	2¾	1¾	1¾	Staple	Staple	—
ZH3428	Z38	28 ga gal	1¾	2¾	2¾	1¾	Staple	Staple	—



ZH24



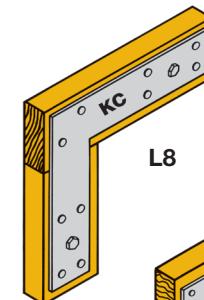
ZH241



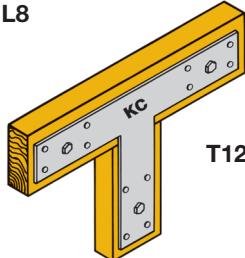
ZH24

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)			NAIL SCHEDULE		BOLT SCHEDULE	DESIGN LOAD	
			W	H	L	HORIZ	VERT		NAILS LBS	BOLTS LBS
T6	66T	14 ga gal	1½	5	6	4-16d	2-16d	3-½ MB	545	465
T12	128T	14 ga gal	2	8	12	8-16d	4-16d	3-½ MB	545	465
T1212	1212T	14 ga gal	2	12	12	8-16d	4-16d	3-½ MB	545	465
TH12	1212HT	¾₁₆ stl	2½	12	12	—	—	6-¾ MB	—	1860
TH16	1616HT	¾₁₆ stl	2½	16	16	—	—	6-¾ MB	—	1860
L6	66L	14 ga gal	1½	6	6	2-16d	2-16d	2-½ MB	545	465
L8	88L	14 ga gal	2	8	8	4-16d	4-16d	2-½ MB	545	585
L1212	1212L	14 ga gal	2	12	12	4-16d	4-16d	2-½ MB	545	585
LH12	1212HL	¾₁₆ stl	2½	12	12	—	—	4-¾ MB	—	1230
LH16	1616HL	¾₁₆ stl	2½	16	16	—	—	4-¾ MB	—	1230



L8



T12

T
TH
L
LH

ANGLES AND ANCHORS

HL HEAVY ANGLES/GUSSETS

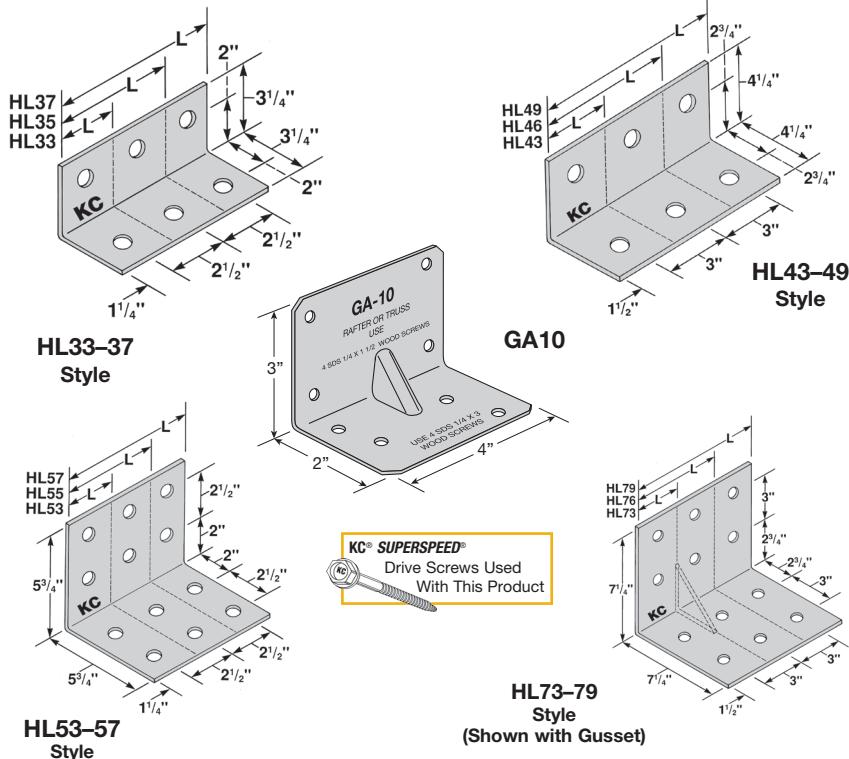
Design Features . . . provide fast, accurate bolting of two intersecting wood members (reinforcing intersection joints). Erection nail holes are provided for easy installation.

Material . . . $\frac{3}{16}$ " and $\frac{1}{4}$ " steel, depending upon size and load requirements.

Finish . . . HL, HLG KC® **SUPERSPEED**® gray paint.

Special . . . heavy angles are designed for standardization and construction economies, and to provide compatibility with the KC® **SUPERSPEED**® structural hardware line.

Ordering Information . . . for gusset, add G to stock no. (Example: HL79G)



GA GUSSETS

Design Features . . . a 1-piece design provides 3-way connection (top-bottom-side) for variety of applications. Erection nail holes are provided to speed up installation.

Material . . . 12 ga. galvanized steel.

Special . . . The GA10 attaches to truss gables and can be installed into wood (KC® **SUPERSPEED**® Drive Screws are provided). This provides greater lateral wind resistance.

Options . . . Special sizes can be made to order.

GTH GIRDER TIES

Design Features . . . this series provides three different design configurations for light, medium, and high uplift resistance. Uplift resistance is for wood frame and concrete block construction for all three models.

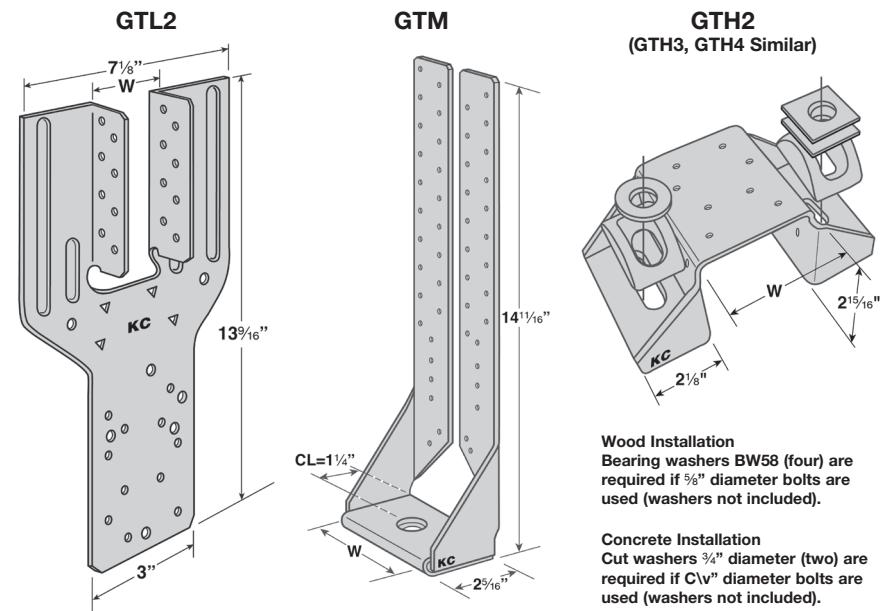
GTH . . . can be installed on trusses and beams with top chord slopes for $\frac{3}{12}$ to $\frac{5}{12}$.

Material . . . GTL – 14 ga. galvanized steel.
GTM – 12 ga. galvanized steel.
GTH – 7 ga. steel.

Finish . . . KC® **SUPERSPEED**® gray paint.

Installation . . . 2-ply girder or beam, shimming is required when using GTH3 model; fasten to act as one unit.

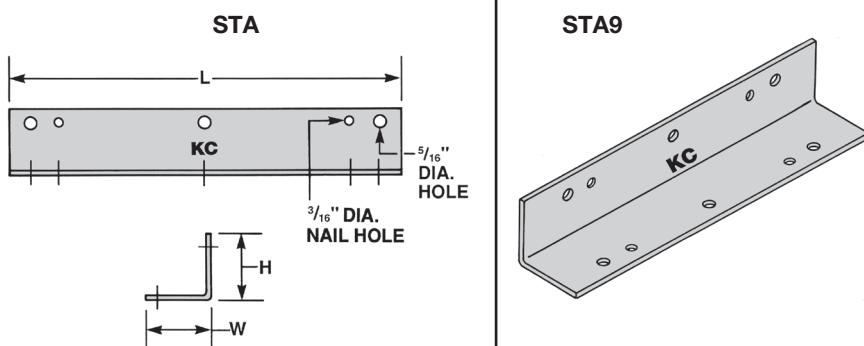
Option . . . special sizes can be made to order. Products can be altered for use with KC® **SUPERSPEED**® Drive Screws as fastening applications.



STA STAIR TREAD ANGLES

Design Features . . . provide the builder with a faster, more structurally sound method for stair tread installation . . . $\frac{3}{16}$ " diameter holes for $\frac{1}{4}$ " lag bolts, or KC® **SUPERSPEED**® Drive Screws $\frac{1}{4}$ SDS x length desired. Erection nail holes are provided for easy installation . . . eliminate the costly conventional notched supports. Two sizes are available, STA9 and STA10.

Material . . . 12 ga. galvanized steel.



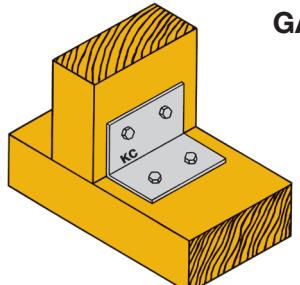
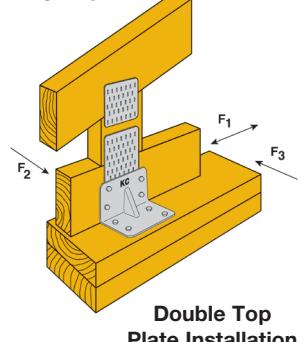
ANGLES AND ANCHORS

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		OPTIONAL PLATE GUSSET PER ANGLE	BOLT SCHEDULE	DESIGN LOAD	
			W	L			PARALLEL TO GRAIN LBS	PERPENDICULAR TO GRAIN LBS
HL33	HL33	3/16 stl	3 1/4	2 1/2	—	2-5/8 MB	1075	565
HL35	HL35	3/16 stl	3 1/4	5	—	4-5/8 MB	2150	1130
HL37	HL37	3/16 stl	3 1/4	7 1/2	—	6-5/8 MB	3225	1695
HL53	HL53	3/16 stl	5 3/4	2 1/2	—	4-5/8 MB	2150	1130
HL55	HL55	3/16 stl	5 3/4	5	—	8-5/8 MB	4300	2260
HL57	HL57	3/16 stl	5 3/4	7 1/2	—	12-5/8 MB	6450	3390
HL43	HL43	1/4 stl	4 1/4	3	—	2-3/4 MB	1565	645
HL46	HL46	1/4 stl	4 1/4	6	—	4-3/4 MB	3130	1290
HL49	HL49	1/4 stl	4 1/4	9	—	6-3/4 MB	4695	1935
HL73	HL73	1/4 stl	7 1/4	3	—	4-3/4 MB	3130	1290
HL76	HL76	1/4 stl	7 1/4	6	—	8-3/4 MB	6260	2580
HL79	HL79	1/4 stl	7 1/4	9	—	12-3/4 MB	9390	3870
HL35G	HL35G	3/16 stl	3 1/4	5	1	4-5/8 MB	2150	1130
HL37G	HL37G	3/16 stl	3 1/4	7 1/2	2	6-5/8 MB	3225	1695
HL55G	HL55G	3/16 stl	5 3/4	5	1	8-5/8 MB	4300	2260
HL57G	HL57G	3/16 stl	5 3/4	7 1/2	2	12-5/8 MB	6450	3390
HL46G	HL46G	1/4 stl	4 1/4	6	1	4-3/4 MB	3130	1290
HL49G	HL49G	1/4 stl	4 1/4	9	2	6-3/4 MB	4695	1935
HL76G	HL76G	1/4 stl	7 1/4	6	1	8-3/4 MB	6260	2580
HL79G	HL79G	1/4 stl	7 1/4	9	2	12-3/4 MB	9390	3870

KC® STK NO	REF NO	MATERIAL	KC® SUPERSPEED® DRIVE SCREWS		DESIGN LOAD (LBS)		
			TO RAFTERS/TRUSS	TO PLATES	UPLIFT	F ¹	F ²
GA10	HGA10	12 ga gal	4-SDS 1/4 x 1 1/2	4-SDS 1/4 x 3	695	1170	950
							785

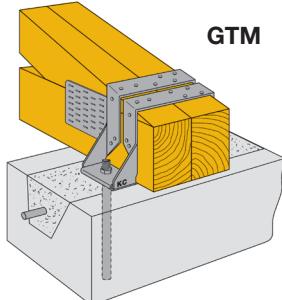
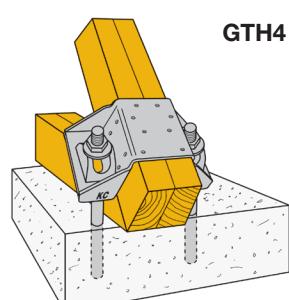
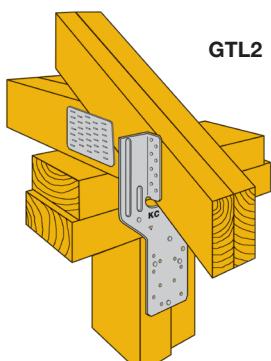
HL
HLG
GA

**GA10**

Double Top
Plate Installation

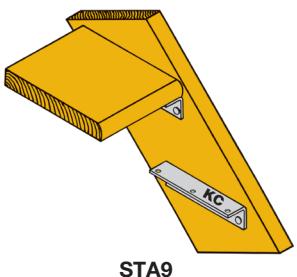
For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL (INCHES)		WIDTH	O.C. DIM BETWEEN ANCHORS	NAIL & BOLT SCHEDULE			DESIGN LOAD (MAX LBS) (UPLIFT)
		STRAP	BASE THICKNESS			TO CONCRETE	TO WOOD	TO GIRDER	
GTL2	LGT2	14 ga gal	—	3 1/8	—	—	14-16d x 2 1/2"	14-16d x 2 1/2"	2235
GTM	MGT	12 ga gal	5/8	3 3/4	—	5/8	—	22-10d	4010
GTH2	HGT-2	7 ga	1/2	3 5/16	5 3/4	3/4	5/8	8-10d	9685
GTH3	HGT-3	7 ga	1/2	4 15/16	7 3/8	3/4	5/8	8-10d	9685
GTH4	HGT-4	7 ga	1/2	6 9/16	9	3/4	5/8	16-10d	9685

**GTM****GTH4****GTL2**

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)			LAG BOLTS	DESIGN LOAD (LAG BOLTS)
			W	H	L		
STA9	TA9	12 ga gal	1 1/2	1 1/2	9	6-1/4 x 3 LAG	585
						6-SDS 1/4 x 3	
STA10	TA10	12 ga gal	1 1/2	1 1/2	10	8-1/4 x 3 LAG	780
						8-SDS 1/4 x 3	

STA**STA9**

SAI**STRAP ANCHORS**

Design Features . . meet specifications for a variety of "wood-to-concrete or masonry" applications, including seismic anchorage for concrete walls-to-floor or roof diaphragms. For anchor down use, the **SA/HSA** series has a 1-piece design – no separate anchors are required. The required embedment is also shorter than for the **AD/ADA** series. This makes the strap anchor and heavy strap anchor ideal items for the competitive construction trade. The **SA** series and the **HSA** series are considered unsatisfactory where any of the following exist:

- A horizontal cold joint between the slab and the foundation wall or footing beneath, unless provisions are made to transfer the load.
- They are installed in slabs poured over foundation walls formed of concrete block.
- The members being anchored are less than 3 1/2" wide (wood splitting may occur when nailed).

Minimum concrete strength must be 2000 psi for the allowable design loads. Listed values are verified by test using a safety factor of three.

■ SAI

The **SAI** is designed especially for wood I-Joist; nail spacing minimizes wood splitting (10d x 1 1/2" nails 3" on-center).

■ SA/TAT

The standard straight strap anchor attaches to the top of the purlin; it must be embedded 4". The minimum edge distance is 5". The **SAT** provides a 90° twist in the strap; it attaches to the side of the purlin. It must be embedded 4". The minimum edge distance is 5".

■ SA51/SA68

The **SA51/SA68** has a range of nails from a minimum of 9–16d to a maximum of 24–16d. Extra nail holes are provided. Loads can be calculated according to the code up to a maximum of 4610 lbs.

■ HSA 10KIPS

Heavy loaded strap anchor made from 10 ga. galvanized steel by 3" section. This strap anchor is the heaviest anchor manufactured in the industry. Use for commercial trusses and glu-lam construction.

■ HSA 10KIPS

Heavy loaded strap anchor made from 10 ga. galvanized steel by 3" section. This strap anchor is the heaviest anchor manufactured in the industry. Use for commercial trusses and glu-lam construction.

■ HSA/HSAT

The heavy strap anchor is embedded 6" for the **HSA28** and 8 1/4" for the **HSA35**. The minimum edge distance is 5". The **HSAT** provides a 90° twist in the strap and it attaches to the side of the purlin. The **HSA** and the **HSAT** have an increased metal cross section and hook depth to provide a load-carrying capacity above design loads of the standard **SA** series.

■ CSAI

The **CSAI** is designed for concrete embedments and may be used on a wide variety of composite wood products including 3 1/2" wide wood I-joints and open web trusses.

■ MSAI

The **MSAI** is designed for masonry unit block wall construction and may be used on a wide variety of composite wood products including 3 1/2" wide wood I-joints and open web trusses. The masonry embedment line on the **MSAI** allows for 4" of grout embedment in a standard 8" concrete masonry unit.

Note: The **CSAI** is manufactured from 18 ga. galvanized steel which can be installed with air gun nailers. This eliminates the high labor cost of hand nailing.

Material . . **HSA 10KIP/HSA/HSAT** – 10 ga. galvanized steel.

SA/SAT/SAT/SAMT – 12 ga. galvanized steel.

CSAI – 18 ga. galvanized steel.

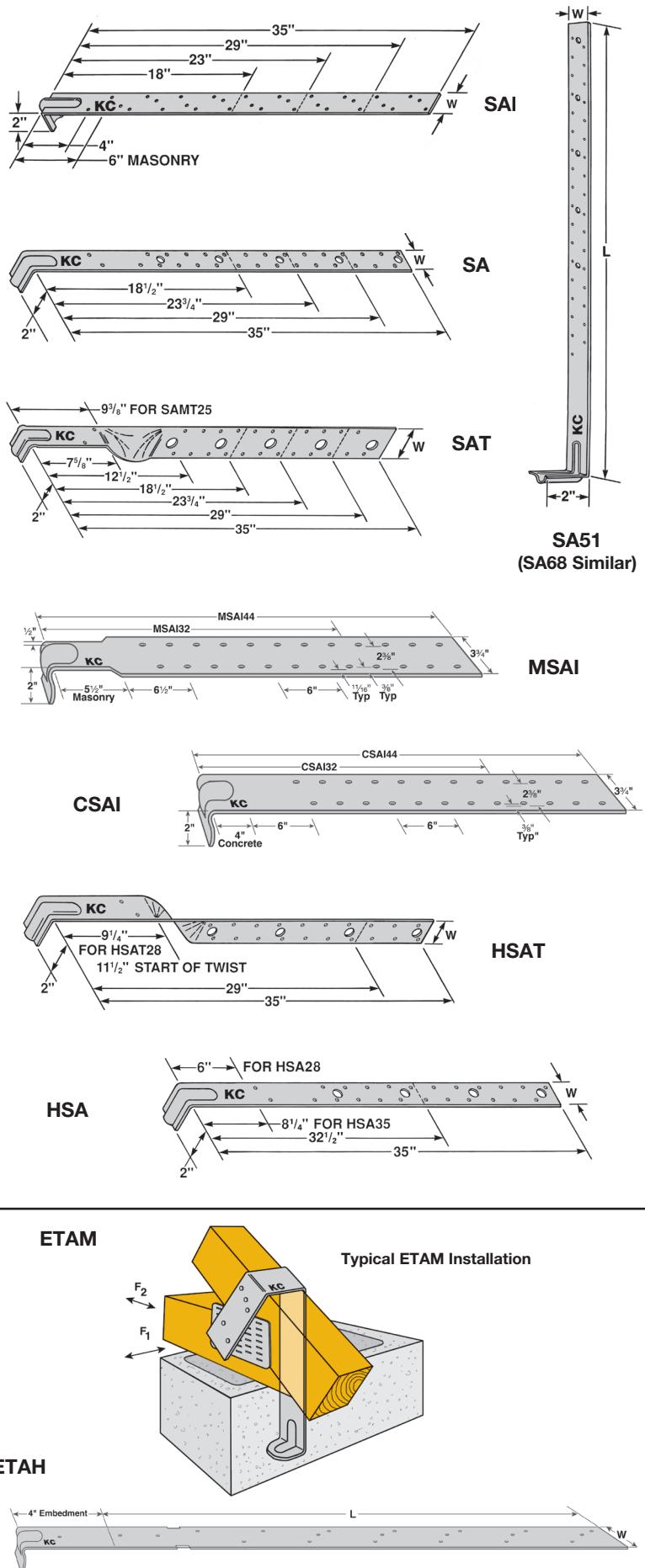
MSAI – 14 ga. galvanized steel.

ETAM **EMBEDDED TRUSS ANCHORS**

Design Features . . meet engineered specifications to properly attach roof trusses to masonry or concrete walls. All embedded truss anchors have been thoroughly tested by an ICC approved independent testing laboratory. **ETAs** can be used with one-, two-, or three-ply trusses with staggered nail pattern to offer increased uplift load capacity. All embedment is 4" into a poured concrete bond beam or block wall that is grouted. The minimum center-to-center spacing is 8" for all products.

Warning . . do not drive nails through the truss plate on the opposite side of the truss; this can force the plate off the truss.

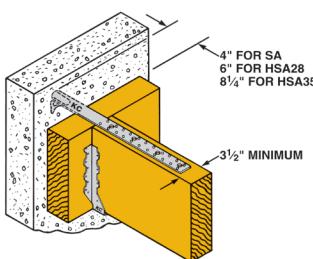
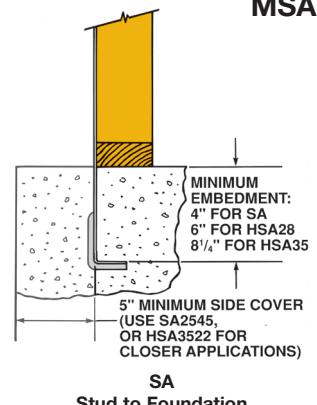
Material . . **ETAM** – 18 ga. galvanized steel. **ETAH** – 16 ga. galvanized steel. **ETAHH** – 14 ga. galvanized steel.



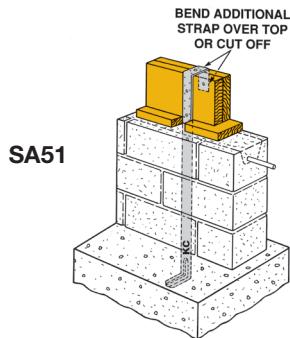
SAI
SA
SAT
SAMT
HSA
HSAT
CSAI
MSAI

For Product Substitutions . . . the ONLY APPROVED EQUAL™

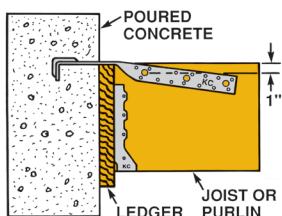
KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL AND BOLT SCHEDULE		DESIGN LOAD (LBS)			
			W	L	NORMAL	MAX (133%)	NORMAL	MAX (133%)		
SA18	PA18	12 ga gal	2	18½	12-16d	2-½ MB	1730	2305	1360	1815
SA23	PA23	12 ga gal	2	25¾	18-16d	3-½ MB	2590	3455	2040	2720
SA28	PA28	12 ga gal	2	29	24-16d	4-½ MB	3455	4610	2720	3625
SA35	PA35	12 ga gal	2	35	24-16d	4-½ MB	3455	4610	2720	3625
SA51	PA51	12 ga gal	2	51	9-16d	—	1270	1690	—	—
SA68	PA68	12 ga gal	2	68	9-16d	—	1270	1690	—	—
SAI18	PAI18	12 ga gal	2	18	14-10d x 1½	—	1455	1940	—	—
SAI23	PAI23	12 ga gal	2	23	19-10d x 1½	—	1975	2635	—	—
SAI28	PAI28	12 ga gal	2	28	23-10d x 1½	—	2600	3465	—	—
SAI35	PAI35	12 ga gal	2	35	23-10d x 1½	—	3015	4020	—	—
SAT18	PAT18	12 ga gal	2	18½	8-16d	2-½ MB	1150	1535	1360	1815
SAT23	PAT23	12 ga gal	2	23¾	14-16d	3-½ MB	2015	2690	2040	2720
SAT28	PAT28	12 ga gal	2	29	20-16d	4-½ MB	3455	4610	2720	3625
SAT35	PAT35	12 ga gal	2	35	20-16d	4-½ MB	3455	4610	2720	3625
HSA28	HPA28	10 ga gal	2½	31¼	24-16d	4-½ MB	3650	4865	2740	3655
HSA35	HPA35	10 ga gal	2½	35	29-16d	4-½ MB	4410	5875	2740	3655
HSAT28	HPAT28	10 ga gal	2½	29	18-16d	3-½ MB	2735	3650	2055	2740
HSAT35	HPAT35	10 ga gal	2½	35	22-16d	3-½ MB	3345	4460	2055	2740
SAMT25	PATM25	12 ga gal	2	25¾	14-16d	3-½ MB	2015	2690	2040	2720
CSAI32	CPAI32	18 ga gal	¾	32	16-10d x 1½	—	1455	1940	—	—
CSAI44	CPAI44	18 ga gal	¾	44	24-10d x 1½	—	2185	2910	—	—
MSAI32	MPAI32	14 ga gal	¾	32	16-10d x 1½	—	1470	1960	—	—
MSAI44	MPAI44	14 ga gal	¾	44	24-10d x 1½	—	2205	2865	—	—
HSA10KIP	—	10 ga gal	3	48	38-16d (hard)	—	8095	10765	—	—



SA/HSA
Purlin to Wall

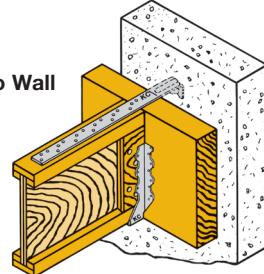


SA51

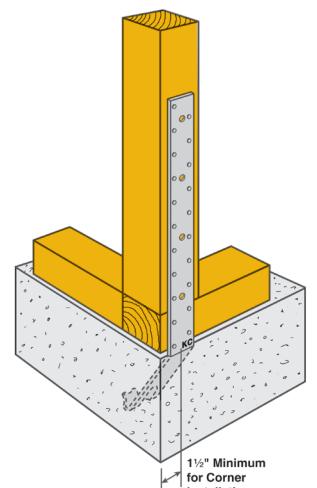


SAT23

SAI23
Wall I-Joist to Wall



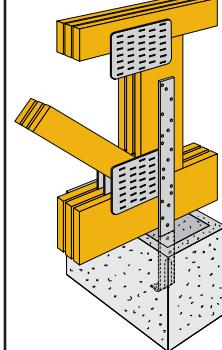
(Full Table Values)
See Note On Page 70



For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE 1 PLY TRUSS	DESIGN LOAD UPLIFT LBS	NAIL SCHEDULE 2 OR 3 PLY TRUSS	DESIGN LOAD UPLIFT LBS	LATERAL DESIGN LOAD (LBS)	
			L	W					F ¹	F ²
ETAM16	META16	18 ga gal	12	1½	12-10d x 1½	1465	10-16d	1500	340	650
ETAM18	META18	18 ga gal	14	1½	14-10d x 1½	1600	10-16d	1600	340	650
ETAM20	META20	18 ga gal	16	1½	14-10d x 1½	1600	10-16d	1600	340	650
ETAM22	META22	18 ga gal	18	1½	14-10d x 1½	1600	10-16d	1600	340	650
ETAM24	META24	18 ga gal	20	1½	14-10d x 1½	1600	10-16d	1600	340	650
ETAH16	HETA16	16 ga gal	12	1½	11-10d x 1½	1345	11-16d	1900	340	745
ETAH20	HETA20	16 ga gal	16	1½	10-10d x 1½	1245	10-16d	1830	340	745
					12-10d x 1½	1495	12-16d	1905	340	745
					14-10d x 1½	1745	12-16d	1905	340	745
					16-10d x 1½	1905	12-16d	1905	340	745
ETAH24	HETA24	16 ga gal	20	1½	16-10d x 1½	1905	12-16d	1905	340	745
ETAHH16	HHETA16	14 ga gal	12	1½	12-10d x 1½	1510	12-16d	2235	340	745
ETAHH20	HHETA20	14 ga gal	16	1½	17-10d x 1½	2140	15-16d	2380	340	745
ETAHH24	HHETA24	14 ga gal	20	1½	21-10d x 1½	2380	15-16d	2380	340	745

ETAM,
ETAH,
ETAHH



HSA STRAP ANCHORS

SSAD ■ HSA3522/HSA3522-2P

The **HSA3522** (heavy loads) is designed to be installed at the edge of the concrete form. Installation nail holes are provided to allow nailing to the form. By using this method, a 1" deeper embedment is guaranteed. It is pre-bent to control the 10° embedment at the required 22° angle; therefore, the field bending is not necessary on the **HSA3522**. The **HSA3522-2P** is used in two-pour foundations and in 4x's to reduce the problem of wood splitting. When 2x's and 3x's are used, fill every other nail hole with a 16d nail or use a 10d x 1½" nail in every nail hole. A reduction in load will result from this nailing.

■ SSAD

The NEW **KC® SSAD SUPERSPEED®** strap anchor down is used for an anchor down condition with 2 – 2x lumber. Embossed holes provide for use with gun nail applications. Nail holes are engineered for use on 1½" members; this reduces the possibility of wood splitting.

■ SA2545

The **SA2545** is pre-bent to control the embedment at the required angle. It is designed to simplify and speed up installation.

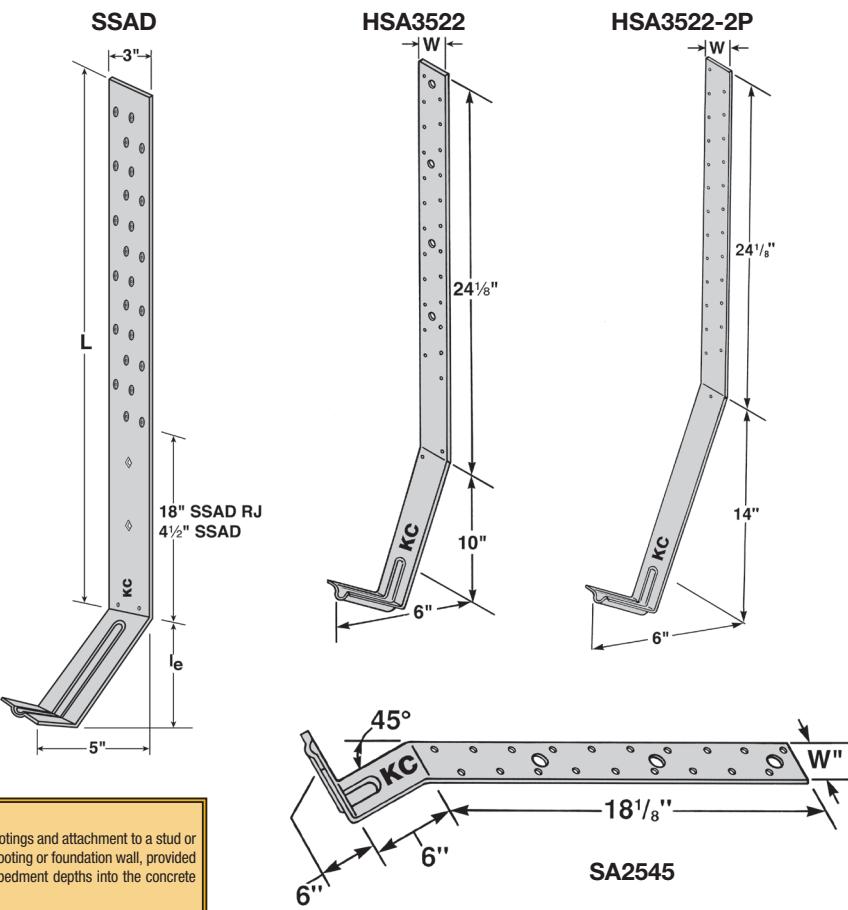
- Install before pouring concrete by nailing to the form.
- Insert the strap after the concrete is poured. When the concrete has cured, bend the strap to the stud and attach by nailing.

Material . . .

HSA3522/HSA3522-2P – 10 ga. galvanized steel.

SA2545/SSAD – 12 ga. galvanized steel.

LSSAD – 14 ga. galvanized steel.



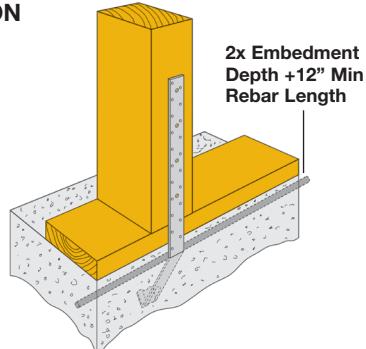
NOTE

The **SA2545**, **HSA3522** and **HSA3522-2P** are specifically designed for installation in concrete footings and attachment to a stud or post. The anchor may be installed where a horizontal cold joint exists between the slab and the footing or foundation wall, provided it is hooked around a minimum No. 4 reinforcement bar in the shear cone. The minimum embedment depths into the concrete footing for the **SA2545**, and **HSA3522** are 6 inches and 10 inches respectively.

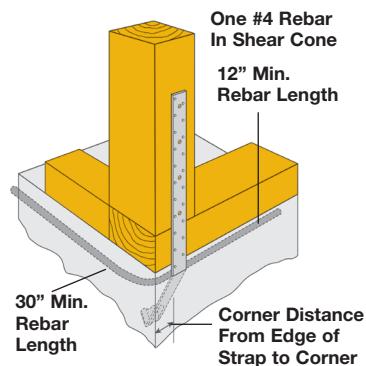
SINGLE POUR INSTALLATION



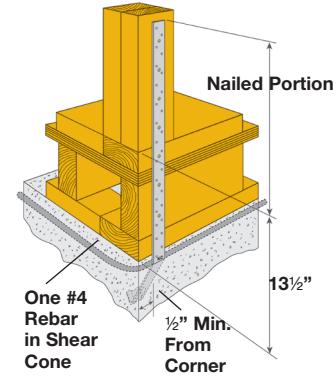
Misinstallation!
Spalling may occur when strap anchors are bent to a horizontal position and then straightened for installation to framing. This practice may require an adjustment to allowable loads and applies to both single and double pour applications.



Installation 1
Typical HSA3522 Single Pour Edge Installation

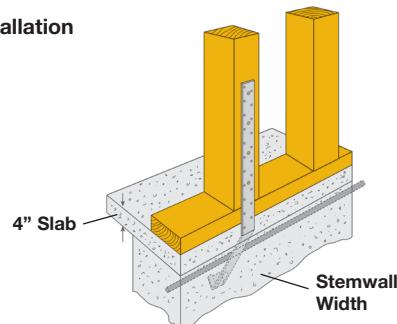


Installation 2
Typical HSA3522 Single Pour Corner and Endwall Installation



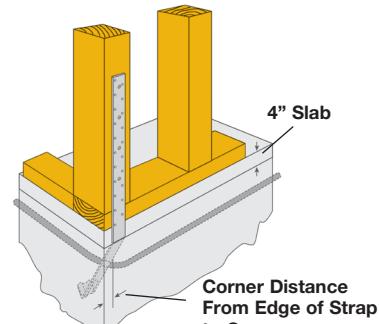
Installation 3
Typical HSA3522 Single Pour Rim Joist Installation

Double Pour Installation



Installation 4

Typical HSA3522-2P Double Pour Edge Installation. Unless noted, install others with bend embedment line at cold joint between slab and foundation

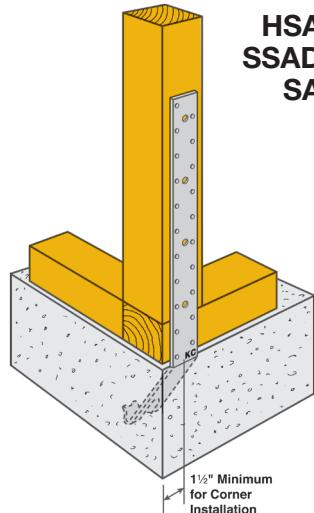


Installation 5

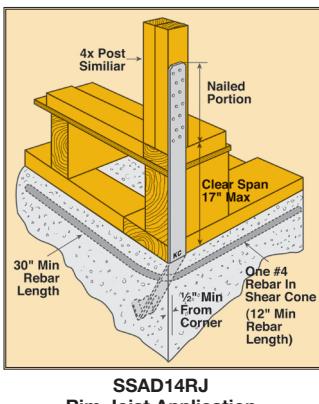
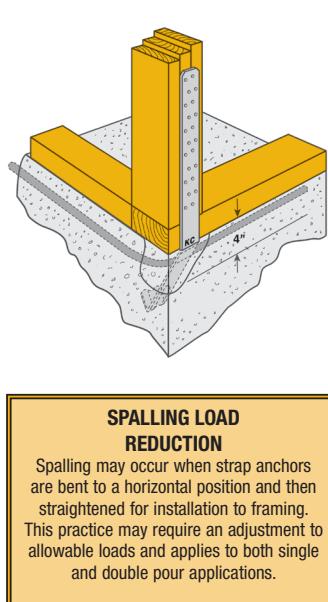
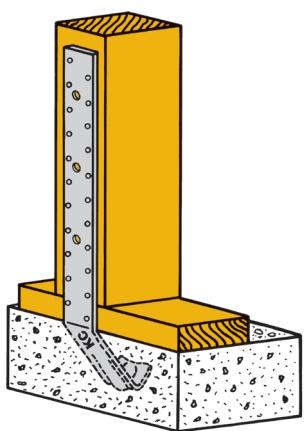
Typical HSA3522-2P Double Pour Corner Installation

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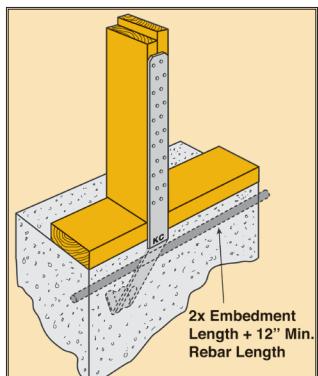
KC® STK NO	REF NO	MIN STEM WALL (INCH)	STRAP LENGTH		L _e (INCH)	NAIL SCHEDULE	DESIGN LOAD (LBS) MAX (133%)								
			STD MODEL	RIM JOIST MODEL			1/2"	1 1/2"	L _e	1/2"	1 1/2"	L _e	1/2"	1 1/2"	L _e
2000 PSI CONCRETE 2500 PSI CONCRETE 3000 PSI CONCRETE															
LSSAD8 / LSSAD8RJ	LSTHD8 / LSTHD8RJ	6	21 1/8	35 1/8	8	24-16d Sinker	1945	1945	1945	1945	1945	2430	2040	2190	2920
SSAD8 / SSAD8RJ	STHD8 / STHD8RJ	6	21 1/8	35 1/8	8	24-16d Sinker	1805	2085	2780	2255	2605	3475	2710	3125	4170
SSAD10 / SSAD10RJ	STHD10 / STHD10RJ	6	23 1/8	36 1/8	10	28-16d Sinker	2300	2525	3285	2875	3160	4105	3450	3790	4925
SSAD14 / SSAD14RJ	STHD14 / STHD14RJ	6	31 1/8	39 1/8	14	38-16d Sinker	4075	4365	5820	5095	5455	5820	5820	5820	5820
LSSAD8 / LSSAD8RJ	LSTHD8 / LSTHD8RJ	8	21 1/8	35 1/8	8	24-16d Sinker	2000	2000	2000	2500	2500	2500	3000	3000	3000
SSAD8 / SSAD8RJ	STHD8 / STHD8RJ	8	21 1/8	35 1/8	8	24-16d Sinker	2605	2805	4005	3255	3505	5005	3905	4100	5820
SSAD10 / SSAD10RJ	STHD10 / STHD10RJ	8	23 1/8	36 1/8	10	28-16d Sinker	3040	3270	4675	3800	3925	5820	4560	4710	5820
SSAD14 / SSAD14RJ	STHD14 / STHD14RJ	8	31 1/8	39 1/8	14	38-16d Sinker	4255	4580	5820	5320	5725	5820	5800	5820	5820

SSAD14RJ uses 30-16d sinkers max. Allowable load @ L_e = 5010 @ 133%. L_e = Length EmbedmentHSA3522 or
HSA3522-2P

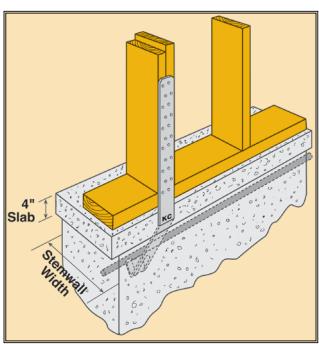
KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)		MIN STEM WALL (INCH)	Le (INCH)	NAIL SCHEDULE	DESIGN LOAD (LBS) MAX (133%)						
			2000 PSI					2500 PSI						
			W	L				1/2"	8"	1/2"	8"			
SINGLE POUR														
SA2545	PAHD42	12 ga gal	2	25 1/8	6	6 1/2	12-16d	1160	2320	1450	2320			
							18-16d	1160	3350	1450	3350			
HSA3522	HPAHD22	10 ga gal	2 1/16	35	6	10	16-16d	1405	3350	1535	3350			
							24-16d	2110	4865	2300	5030			
DOUBLE POUR														
SA2545	PAHD42	12 ga gal	2	25 1/8	6	6 1/2	12-16d	1160	2320	1450	2320			
							12-16d	1160	2320	1450	2320			
HSA3522	HPAHD22	10 ga gal	2 1/16	35	6	10	16-16d	1405	3350	1755	3350			
							19-16d	2010	3985	2515	3985			
HSA3522-2P	HPAHD22-2P	10 ga gal	2 1/16	39	6	14	16-16d	2460	3350	2460	3350			
							24-16d	2460	4865	2460	5030			



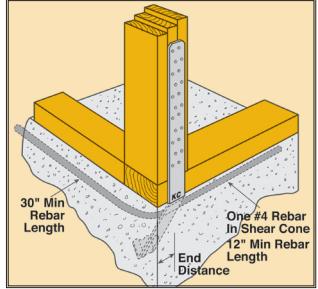
SSAD14RJ Rim Joist Application



SSAD Edge Installation



SSAD14 Two Pour Installation



Corner SSAD Installation on 3-2x studs (for 2 pour, see footnote 4).

ANCHOR DOWNS

AD

ANCHOR DOWNS

ADA

Design Features . . offer the builder a lighter anchor down device with greater load capacity at a more affordable price . . applications include:

- **AD/ADA/ADB Series . .** no standard washer requirement with anchorage bolts. Washer location is indicated on item drawings.
- **ADA Series . .** no more inspection problems, as the ADA series has a load transfer plate formed and pressed into the base.
- Uses include anchoring vertical wood members to foundation to resist uplifts due to overturning.
- Installation can be made horizontally for seismic ties.

KC® STOCK NO	WASHER SIZES OUTSIDE DIAMETER (INCHES)	MATERIAL
AD2	1 $\frac{1}{4}$	10 ga
AD5	2	9 ga
AD6	2 $\frac{1}{2}$	8 ga
AD7	2 $\frac{3}{4}$	8 ga
AD9	2 $\frac{3}{4}$	8 ga
AD12	2 $\frac{3}{4}$	8 ga
AD15	3	8 ga

Fourteen configurations meet a variety of size and load specifications, with the location of the anchor down on the stud (D) measured at 7x's the diameter of the bolt above the plate or the self-jigging. Minimum required distance is automatically maintained.

Material . . $\frac{3}{16}$ ", $\frac{1}{4}$ " and $\frac{5}{8}$ " steel, depending on size and load requirements.

Finish . . AD, AD14A and AD20A KC® SUPERSPEED® gray paint.

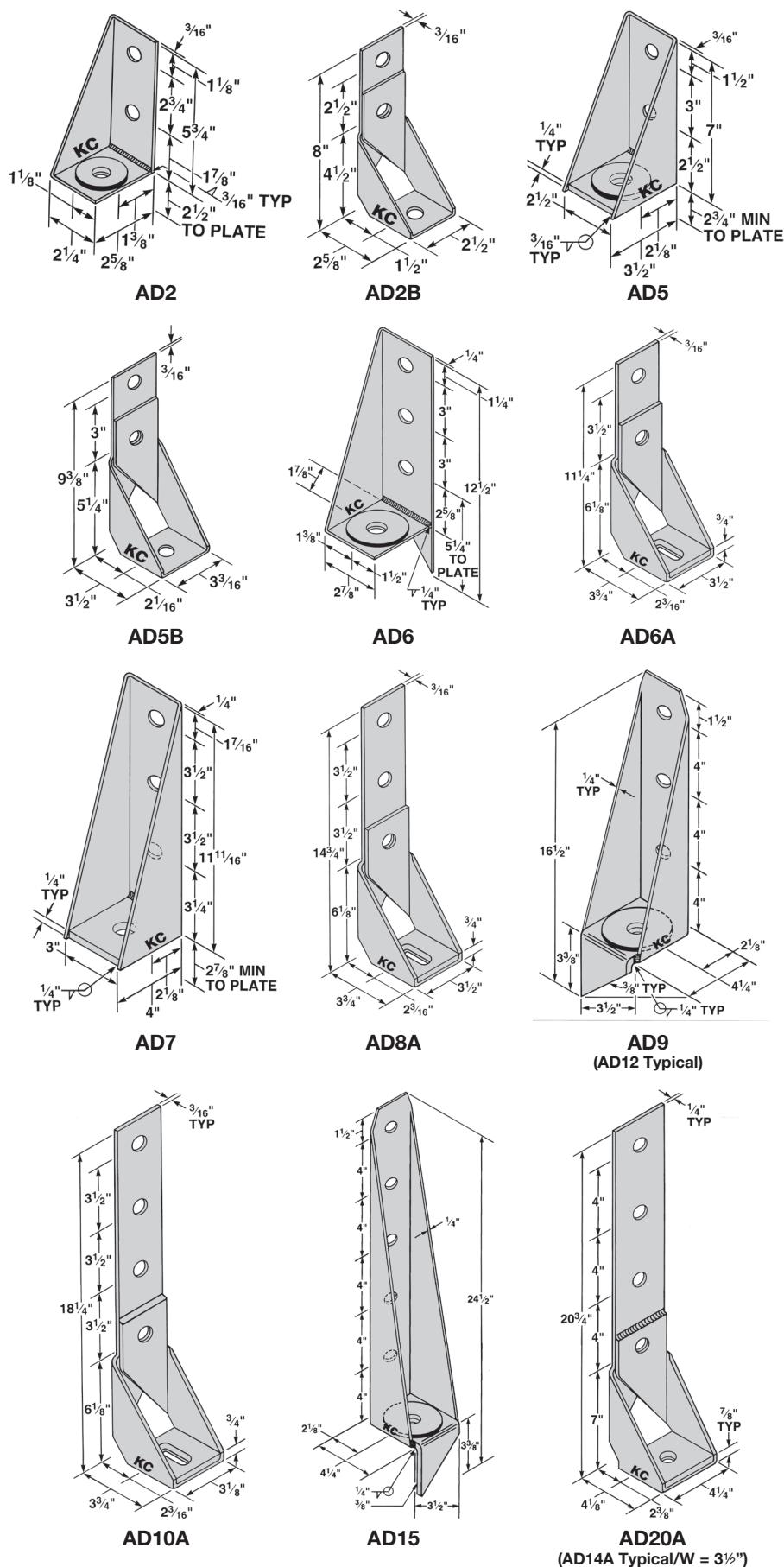
Finish . . ADA-G and ADB-G 7 ga. galvanized steel.

Loads . . have been increased by 33 1/8% for seismic applications.

Special . . features of the ADA-G/ADB-G include:

- **ADB series** requires no load transfer plate due to increased thickness of body part.
- Single piece design results in higher capacity.
- Load transfer plate eliminates the need for seat washer.
- Stud or post bolts are factory lined-up by welding (AD14A where the straps overlap). This reduces labor costs and damage to the machine bolt threads; more importantly, the weld acts to unite the parts as a single unit.
- Self-jigging design allows for flush surface installation to insure code-required 7 bolt diameter spacing from the end of the member.
- There are fewer inspection problems.
- Anchor down may be used to transfer tension loads between floors, to the purlins to masonry or concrete, to the wood wall sections to vertical concrete or masonry or used for overturn requirements and either applications to transfer tension loads.

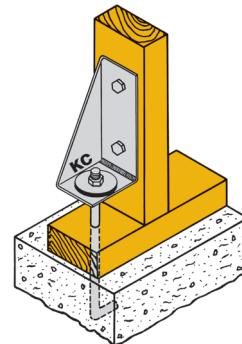
Anchor bolt nuts, should be finger-tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.



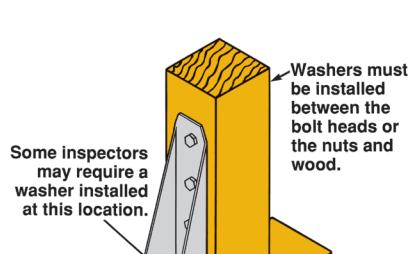
AD
ADA
ADB

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

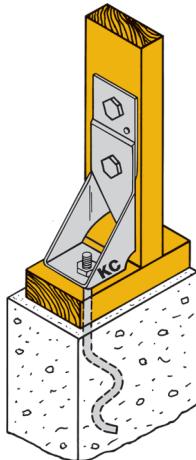
KC® STK NO	REF NO	MATERIAL	HEIGHT (INCHES)	BOLT SCHEDULE		DESIGN LOAD (LBS) 160%					
				TO STUD	TO CONCRETE	1½	2½	3	3½	4½	5½
AD2	HD2	7 ga	5½	2-½ MB	1-½ AB	1630	2625	2855	2855	2850	2845
AD2B	HD2A	7 ga	8	2-½ MB	1-½ AB	1630	2625	2855	2855	2850	2845
AD5	HD5	7 ga	6½	2-¾ MB	1-¾ AB	1940	3140	3745	4080	4070	4060
AD5B	HD5A	7 ga	9½	2-¾ MB	1-¾ AB	1930	3140	3760	4095	4085	4075
AD6	HD6	3 ga	12½	3-¾ MB	1-1 AB	2850	4685	5685	6235	5165	6135
AD6A	HD6A	7 ga	11¼	2-¾ MB	1-¾ AB	2245	3650	4385	5090	5520	5505
AD7	HD7	3 ga	11½	3-¾ MB	1-1½ AB	3325	5400	6485	7595	8255	8200
AD8A	HD8A	7 ga	14¾	3-¾ MB	1-¾ AB	3190	5355	6490	7630	8075	8025
AD9	HD9	3 ga	16½	3-1 MB	1-1½ AB	—	—	—	8560	10760	10665
AD10A	HD10A	7 ga	18½	4-½ MB	1-½ AB	3905	6830	8375	9755	10440	10320
AD12	HD12	3 ga	20½	4-1 MB	1-1½ AB	—	—	—	10975	13950	13755
AD14A	HD14A	3 ga	20¾	4-1 MB	1-1 AB	—	—	—	10975	13950	13755
AD15	HD19/ HD15	3 ga	24½	5-1 MB	1-1½ AB	—	—	—	—	—	19725



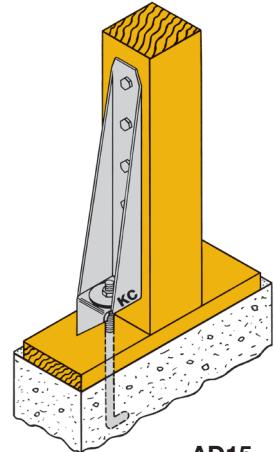
AD2



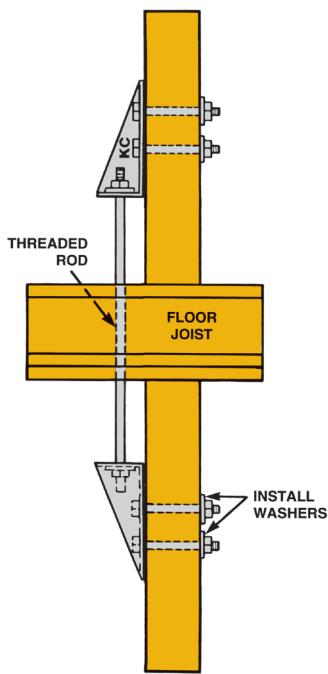
AD9
Typical Installation



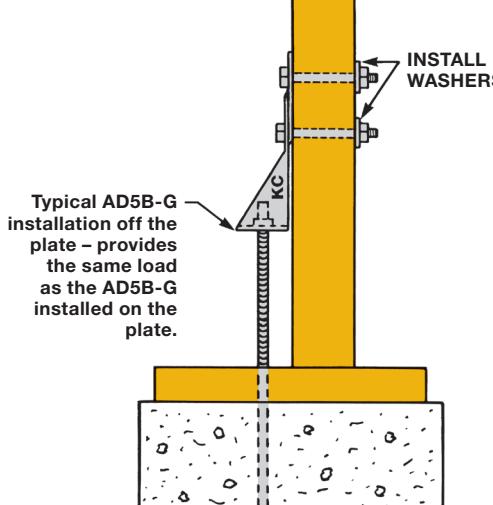
AD5B
Typical Horizontal Installation



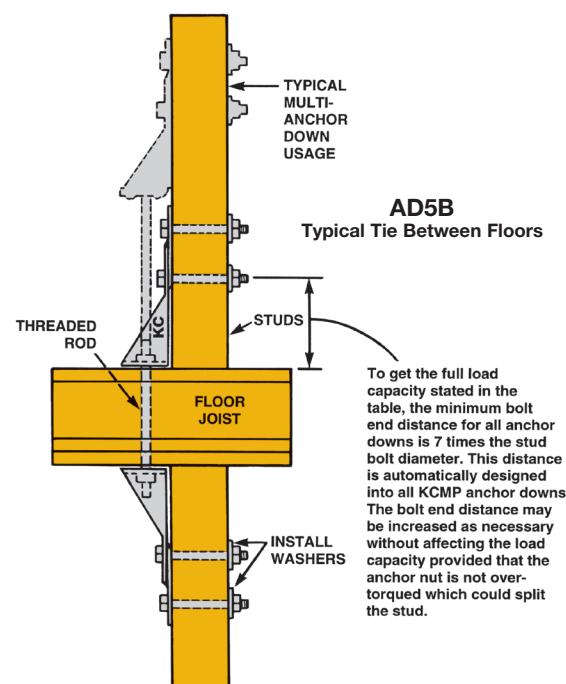
AD15



AD2
Typical Tie Between Floors



AD5B
Typical Installation



AD5B
Typical Tie Between Floors

ANCHOR DOWNS (Screw Type)

ADST

SCREW TYPE ANCHOR DOWNS

Design Features . . heavy gage load transfer plate reduces anchor down deflection . . improved connection using screws instead of bolts . . special screws have been tested and are included with **ADST** . . galvanized steel for corrosion resistance . . designed to easily fit on a 4x post . . flat base makes for easier installation . . ideal for retrofit applications. Heavy loaded anchor downs **ADG**, Anchor Down Screw Types, are tension products used to connect framing members to either concrete, using a suitable anchor bolt, or span between other framing members using threaded rods. For raised installation **ADG** anchor downs require a nut on both side of load transfer plate.

The new **ADG** heavy duty anchor down combining high load capacity and minimizes deflection under load. With the use of a unique load transfer plate which is formed and pressed into the body of the anchor down creating a one piece structural unit.

ADG 8-SDS3	8KIPS
ADG12-SDS3	10KIPS
ADG15-SDS3	15KIPS

Material . . 12 ga. galvanized steel . . **ADST**

7 ga. galvanized steel . . **ADG**

$\frac{3}{8}'' \times 2\frac{1}{2}'' \times 2\frac{1}{2}''$ sq. washer hot dipped galvanized . . **ADG15**

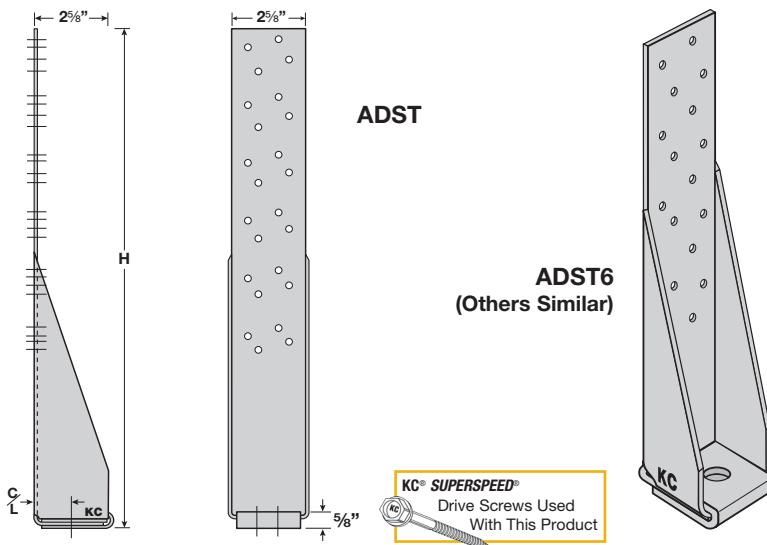
Finish . . Galvanized steel

Special . . the **ADG10-SDS3** anchor down can be used with the **KCAB36** anchor bolt. **KC® SUPERSPEED®** Drive Screws are best installed with a low speed, or variable speed. $\frac{1}{2}''$ drill and a $\frac{3}{8}''$ hex head driver.

Loads . . design loads are based on capacity of special screws (**KC® SUPERSPEED®** Drive Screws) $\frac{1}{4}'' \times 3$ inch of 500 pounds each @ 133% duration. Nails or lag screws cannot be substituted and achieve the listed design loads.

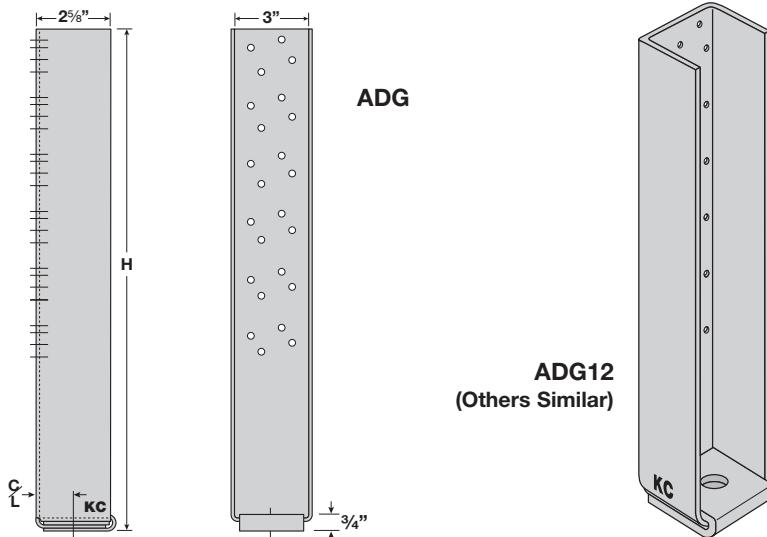
Special . . **KC® SUPERSPEED®** Drive Screws are furnished with the **ADG** Anchor Down for **SUPERSPEED®** labor saving installation.

Anchor bolt nuts should be finger tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.



ADST

ADST6
(Others Similar)



ADG

ADG12
(Others Similar)

ADC

ANCHOR DOWN CONCENTRIC

Design Features . . offer the builder a new style anchor down concentric to eliminate bending on the stud. Easier and faster to install using **KC® SUPERSPEED®** Drive Screws which are included with the product and not the old style bolts which are not included and are labor intensive sometimes missed sized or ordered wrong.

1. Easier Installation
2. High design Loads
3. Lower cost of installing product

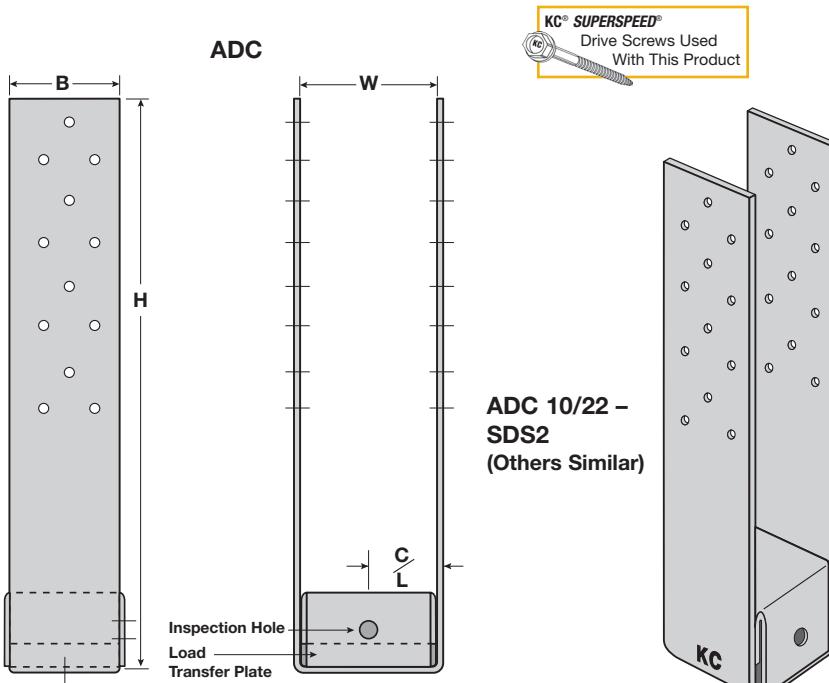
Material . . 10 ga. galvanized steel (strap and base) $\frac{3}{8}''$ steel washer (slotted $\frac{3}{8}''$ for adjustment)

Sizes . . for 2-2X, 4X and 2-2 x 6 members.
(Members must be installed centered for use as post)

Loads . . **ADC** Anchor Down Concentric has two design load capacities which have been increased by 33 1/3% of seismic applications.

Special . . **ADC** Anchor Down Concentric can be used with product line of **KC® SUPERSPEED®** anchor bolts.

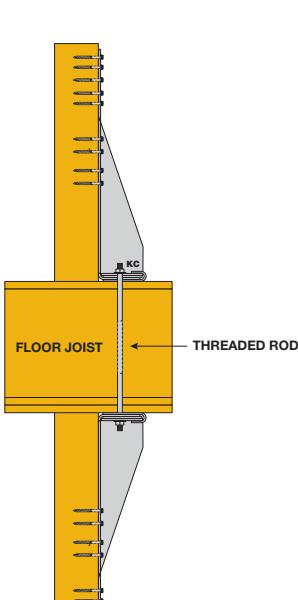
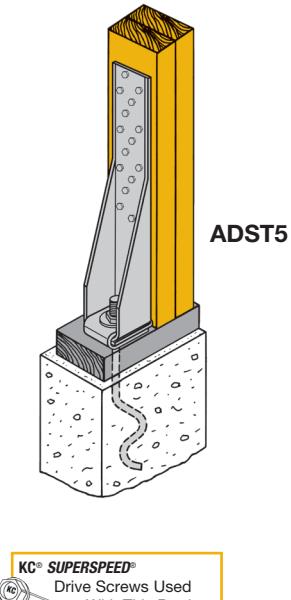
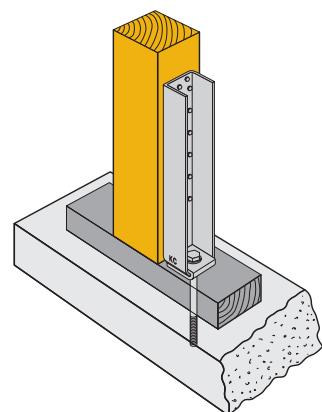
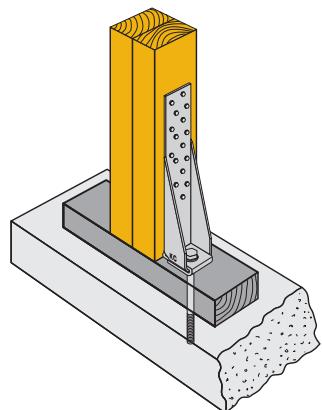
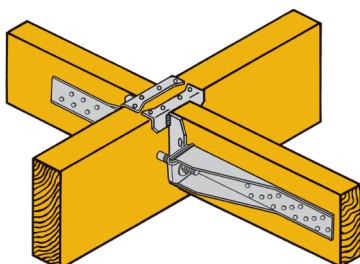
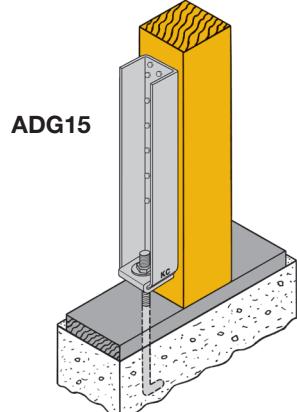
Anchor bolt nuts should be finger tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.



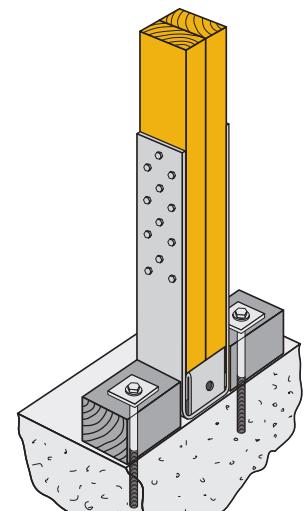
ADC 10/22 -
SDS2
(Others Similar)

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO.	REF NO	HEIGHT (INCHES)	MATERIAL	FASTENER SCHEDULE			DESIGN LOAD (LBS)	DEFLECTION @ 80% OF DESIGN LOAD (INCH)	DEFLECTION @ 90% OF DESIGN LOAD (INCH)	DEFLECTION @ 100% OF DESIGN LOAD (INCH)
				ANCHOR BOLT DIAMETER (INCHES)	CENTER LINE DIMENSIONS	KC® SUPERSPEED® SDS ¼ X 3 DRIVE SCREWS				
ADST2	HDU2/PHD2	9½	12 ga	5/8	1¾	10	4275	.021	.029	.038
ADST5	HDU4/HDU5/ PHD5	11½	12 ga	5/8	1¾	14	5895	.026	.034	.043
ADG8	HDU8/HDO8	15¼	7 ga	7/8	1¼	22	8820	.030	.040	.042
ADG12	HDU11/HHDQ11	18½	7 ga	1	1½	30	13200	.040	.045	.050
ADG15	HDU14/HHDQ14	18½	7 ga	1	1½	36	16325	.070	.073	.080
DDQ2Z	DTT2Z	6½	14 ga	1/2	1¾	8	2145	-	-	-

ADST2
Typical Tie Between FloorADST5
Typical Horizontal InstallationFor Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	DIMENSIONS (INCHES)				FASTENER SCHEDULE		DESIGN LOAD		
			W	H	B	C/L	ANCHOR BOLT DIAMETER (INCHES)	KC® SUPERSPEED® SDS ¼ X 2 DRIVE SCREWS	TENSION (133%) LBS	CONCRETE @2500 PSI LBS	ANCHOR DOWN DEFLECTION @ 100% (INCHES)
ADC 5/22-SDS2	HDC 5/22-SDS 2.5	2-2 x 4	3⅛	9½	3	1¾	5/8	12	4870	7460	.032
ADC 5/4-SDS2	HDC 5/4-SDS 2.5	4 x 4	3¾	9½	3	1¾	5/8	12	4870	9060	.032
ADC 10/22-SDS2	HDC 10/22-SDS 2.5	2-2 x 4	3⅛	14½	3	1¾	7/8	24	9665	7460	.075
ADC 10/4-SDS2	HDC 10/4-SDS 2.5	4 x 4	3¾	14½	3	1¾	7/8	24	9665	9060	.075



SDS**SUPERSPEED® DRIVE SCREWS**

Design Features . . . KC® SUPERSPEED® Drive Screws, SDS 1/4 x 3, are best installed using a 1/2" drive variable speed drill, 5.5 amps or larger, with a 3/8" hex head driver. Screws are designed to be self drilling. Predrilling may be necessary depending on the type, condition, and moisture content of the wood.

Allowable loads are for **ASTM A570** Grade 33 steel side plates.

KC® SUPERSPEED® DRIVE SCREWS

Screw Head Identification
SDS 1/4 x 3 Shown

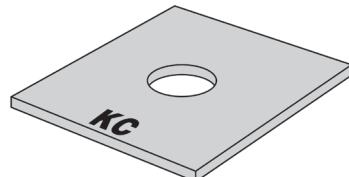
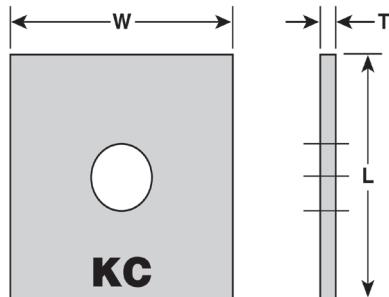
BW**BEARING WASHERS (SQUARE)**

Design Features . . . one of the oldest and simplest but still the most important item used in wood construction . . . used to act as a buffer between nut/bolt head and wood.

Special . . . BW Washers are designed for standardization and construction economies, and to provide compatibility with the KC® SUPERSPEED® structural hardware line. Standard BWs can be used with threaded rod, two nuts and washers to act as an anchor bolt for uplift resistance.

Material . . . specify any size or thickness.

Sizes . . . specify length or width and bolt sizes (round or slotted). Holes are sized 1/16" over bolt size for clearance.



BW1
(3/8" X 3 1/2" X 3 1/2")

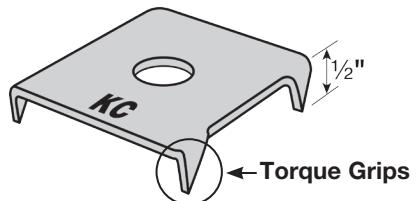
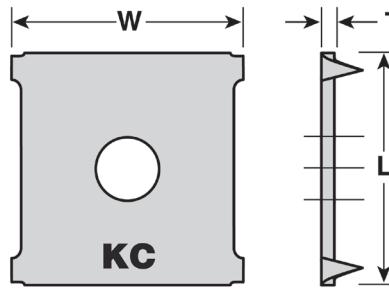
MSP**MUDSILL PLATE WASHERS**

Design Features . . . KC® Metal Products

New MSP Mudsill plate replaces traditional washers and provides stronger connections. The MSP improves the bolt to wood connection by gripping the mudsill. Oversized anchor bolt holes may allow the house to shift up to 1/4" before the bolt begins to restrain movement. Damage and possible failure of the structure can be reduced by using a MSP mudsill plate. The MSP works by transferring the load from the anchor bolt through the gripper prongs on the MSP and into the mudsill.

Sizes . . . 1/2" and 5/8" – diameter of anchor bolt.

Material . . . 14 ga. galvanized steel.

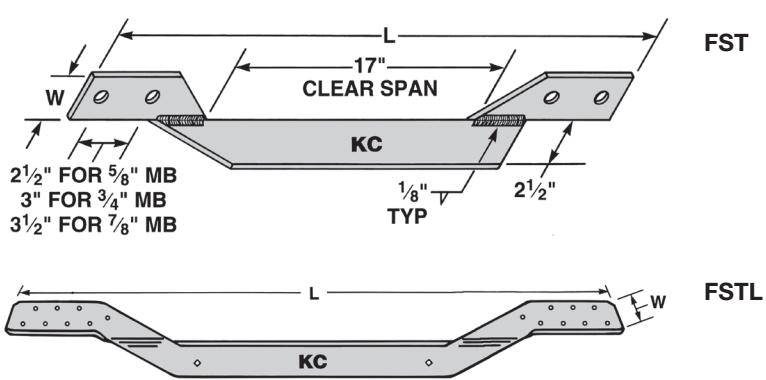
**FSTL****FLOOR STRAP TIES****FST**

Design Features . . . the floor strap ties are especially designed for use as a tension tie for floor-to-floor application. The FST takes the place of two comparably sized ADs or ADAs and the threaded rod, resulting in construction economies and labor-saving installation.

Material . . . 16 ga. galvanized, 12 ga. and 1/4" steel.

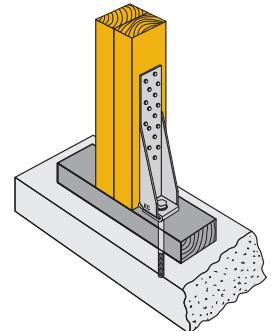
Finish . . . KC® SUPERSPEED® gray paint.

Special . . . the FST standard model has a clear span of 17" so it will accommodate up to a 12" joist. The clear span can be increased with increases to overall lengths. If wood is subject to shrinkage, specify slotted bolt holes in the FST. The FSTL should not be used if wood shrinkage is expected between floors.

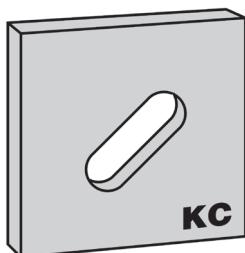


For Product Substitutions . . . the ***ONLY APPROVED EQUAL™***

KC® STK NO	REF NO	KC® SUPERSPEED® DRIVE SCREW	FINISH (PLATED)	DESIGN LOAD (LBS)			
				10 GAGE SHEAR (100%)	7 GAGE SHEAR (100%)	3 GAGE SHEAR (100%)	1/4 PLATE SHEAR (100%)
SDS 1/4 x 1½	SDS 1/4 x 1½	1/4 x 1½ Wood Screw	Zinc	251	247	251	252
SDS 1/4 x 1¾	SDS 1/4 x 1¾	1/4 x 1¾ Wood Screw	Zinc	297	297	301	302
SDS 1/4 x 2	SDS 1/4 x 2	1/4 x 2 Wood Screw	Zinc	312	321	338	341
SDS 1/4 x 2½	SDS 1/4 x 2½	1/4 x 2½ Wood Screw	Zinc	312	321	338	341
SDS 1/4 x 3	SDS 1/4 x 3	1/4 x 3 Wood Screw	Zinc	312	321	338	341
SDS 1/4 x 4½	SDS 1/4 x 4½	1/4 x 4½ Wood Screw	Zinc	312	321	338	341
SDS 1/4 x 6	SDS 1/4 x 6	1/4 x 6 Wood Screw	Zinc	312	321	338	341



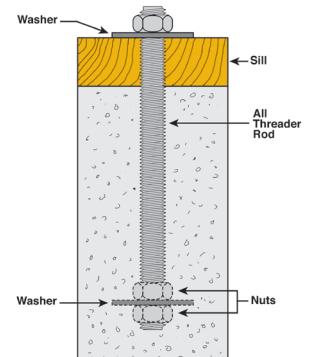
ADST6
Used with SDS 1/4 x 3
Drive Screws



BWS
(Slotted Hole)

KC® STK NO	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		BOLT DIAMETER (INCHES)
			W	L	
LBW 1/2	LBP 1/2	3/16	2	2	1/2
LBW 5/8	LPB 5/8	3/16	2	2	5/8
LBWS 1/2	LBPS 1/2	3/16	3	3	1/2
LBWS 5/8	LBPS 5/8	3/16	3	3	5/8
BW 1/2 - 3	BP 1/2 - 3	1/4	3	3	1/2
BW 5/8 - 3	BP 5/8 - 3	1/4	3	3	5/8
BWS 1/2 - 3	BPS 1/2 - 3	1/4	3	3	1/2
BWS 5/8 - 3	BPS 5/8 - 3	1/4	3	3	5/8
BW 1/2	BP 1/2	3/16	2	2	1/2
BW 5/8 - 2	BP 5/8 - 2	3/16	2	2	5/8
BW 3/4 - 2	—	3/16	2	2	3/4
BW 5/8 SKT*	BP 5/8-SKT	1/4	4	2	5/8
BW 5/8	BP 5/8	1/4	2 1/2	2 1/2	5/8
BW 3/4	BP 3/4	5/16	2 3/4	2 3/4	3/4
BW 7/8	BP 7/8	5/16	3	3	7/8
BW 1	BP 1	3/8	3 1/2	3 1/2	1

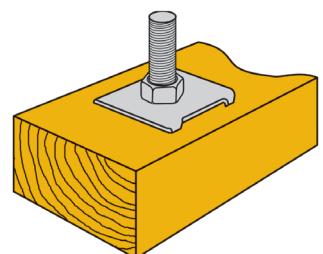
* BW 5/8 SKT sold as kit.



BW

For Product Substitutions . . . the ***ONLY APPROVED EQUAL™***

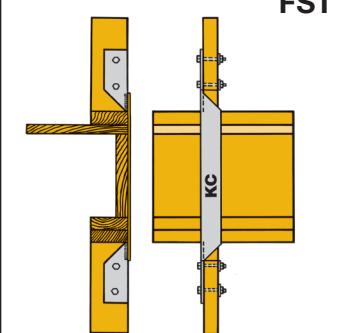
KC® STK NO	MATERIAL (T)	DIMENSIONS (INCHES)		BOLT DIAMETER (INCHES)
		W	L	
MSP 1/2	14 ga gal	2	2	1/2
MSP 5/8	14 ga gal	2	2	5/8



MSP

For Product Substitutions . . . the ***ONLY APPROVED EQUAL™***

KC® STK NO	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		BOLT SCHEDULE TO STUD	DESIGN LOAD (LBS)					
			STUD THICKNESS (INCHES)								
			W (MAX)	L		1 1/2	2	2 1/2	3	3 1/2	
FSTL	LFTA	16 ga gal	2 1/4	38 5/8	16-10d	—	1210	1210	1210	1210	
FST2	FTA2	12 ga	3	37 1/2	4-5/8 MB	1575	3470	3810	3810	3810	
FST5	FTA2	12 ga	3 1/2	45 1/2	4-3/4 MB	1880	3120	3750	4080	4080	
FST7	FTA7	1/4 STL	3 1/2	56	6-7/8 MB	3620	5600	6640	7700	7700	



FSTL

FST5

ANCHOR BOLTS AND HOLDERS

KCAB SUPERSPEED® ANCHOR BOLTS

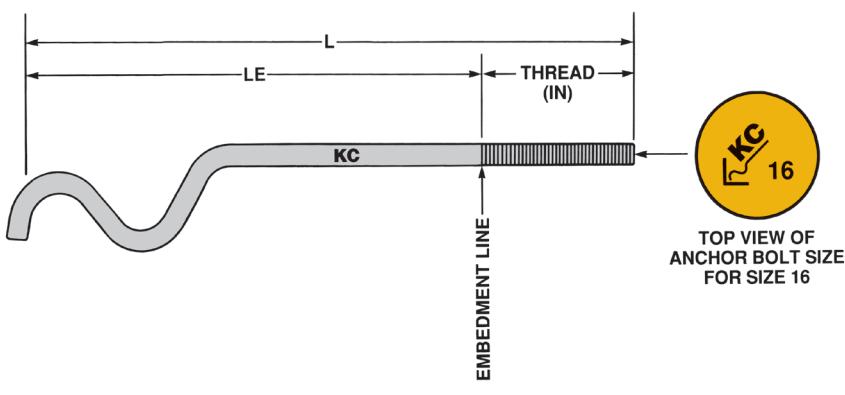
Design Features . . the KC® SUPERSPEED® anchor bolts are designed to be installed with the AD, ADG, ADAG, and ADBG series anchor downs. The load capacity has been tested. Installation is achieved before the pour, using a device to hold the KCAB diagonally at approximately 45° from the wall. Minimum concrete compression strength is 2500 psi and requires no special foundation concrete inspection. Standard nuts and washers are required, but not supplied. KCAB bolts can be used for two-pour systems.

Material . . $\frac{5}{8}$ " and $\frac{7}{8}$ " rod.

Finish . . KCABs may be special ordered with hot dip galvanized coating.

Special . . features of the KCABs include:

- Rolled threads for greater tensile strength.
- Threaded section serves as embedment line for use during installation.
- Stamp for post-pour identification and orientation of an anchor placement.
- Design shape to reduce interference with rebar and concrete side bursting.



KCAB16
(Other Similar)

KCAB36 anchor bolt can be used with AD6A-G, AD8A-G, AD10A-G, ADG8, ADST-G.

ABC ANCHOR BOLT CHAIRS

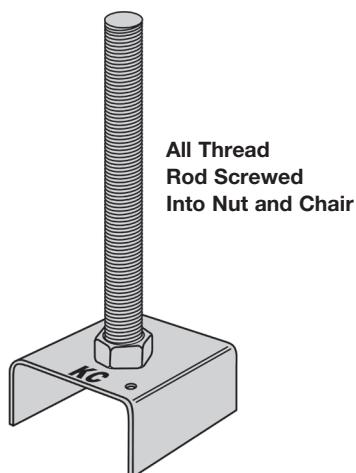
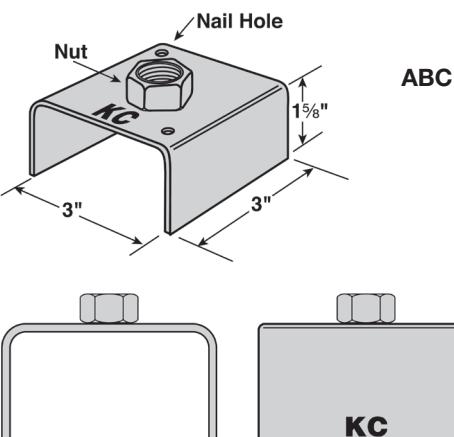
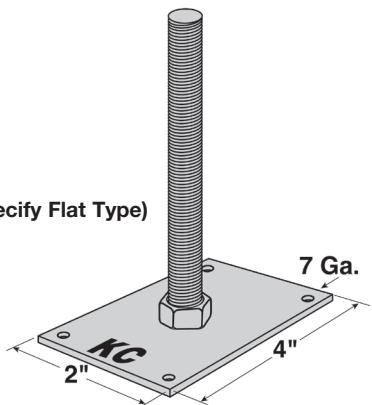
Design Features . . allows the anchor bolt or all-thread rod to be secured before the concrete is poured. The ABC also allows proper alignment of the anchor bolts before wall framing. Anchor bolts will no longer be dislodged by vibrations from power equipment.

Material . . base 14 ga. steel.

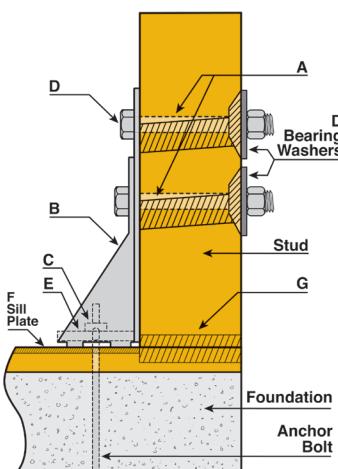
Special . . various lengths of anchor bolts or all-thread rod are available (specify AB or ATR). Custom sizes of the base are also available.

KC® STK NO	BOLT DIMENSIONS (INCHES)	
	DIAMETER	L
ABC1212	$\frac{1}{2}$	12
ABC5812	$\frac{5}{8}$	12
ABC3412	$\frac{3}{4}$	12
ABC-CUSTOM	Specify	Specify

(Specify Flat Type)



CAUSES FOR ANCHOR DOWN DEFLECTION:



- A. Per 97 NDS section 8.1.2.1 bolt holes are to be 1/16 inch larger than bolt diameter. This can cause deflection until the bolt seats in the hole. Increasing the bolt hole diameter will lead to an increase in deflection. Using ADSTG screw type anchor downs eliminates this potential source of deflection.
- B. Installation of Anchor Downs on only one side of the stud creates an eccentric condition which at maximum load can cause additional deflection of the post.
- C. Anchor bolts can loosen especially during the cyclic loads as in earthquakes. Using thread adhesives or nuts with nylon locking inserts can reduce loosening.
- D. Post bolts installed and not tightened or post bolts which become loose as a result of wood post

shrinkage will cause additional deflection under load. Using bearing plates against the wood helps create a stronger connection on the post. Using ADSTG screw type anchor downs reduces this potential source of deflection.

- E. Anchor downs which have been subjected to high loads caused by earthquakes or wind may have been deflected causing a loose connection.
- F. Wood shrinkage at the base of the Anchor Down, sill plates, rim joist, etc. can cause anchor bolts to become loose, which may require retightening.
- G. Compression forces from normal dead and live loads as well as overturning forces from wind or earthquakes may cause the wood at the post ends, sill plates, etc. to crush resulting in gaps and additional deflection.

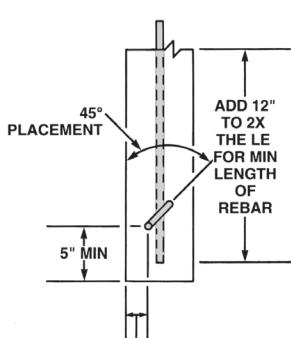
ANCHOR BOLTS AND HOLDERS

For Product Substitutions ... the **ONLY APPROVED EQUAL™**

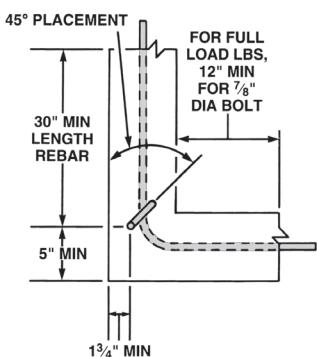
KC® STK NO	REF NO	DIA (INCHES)	L (INCHES)	LE (INCHES)	THREAD (INCHES)	DESIGN LOAD (LBS)			
						6" CONCRETE STEMWALL		8" CONCRETE STEMWALL	
						END CONDITION	CENTER CONDITION	END CONDITION	CENTER CONDITION
KCAB16	SSTB®16	5/8	17	12	5	4265	4600	4765	4765
KCAB20	SSTB®20	5/8	21	16	5	5200	5200	5200	5200
KCAB24	SSTB®24	5/8	25	20	5	5200	5200	5200	5200
KCAB28	SSTB®28	7/8	29	24	5	—	—	9335	10165
KCAB34	SSTB®34	7/8	34	26	6	—	—	9335	10165
KCAB36	SSTB®36	7/8	36	28	8	—	—	9335	10165

the **ONLY APPROVED EQUAL™**

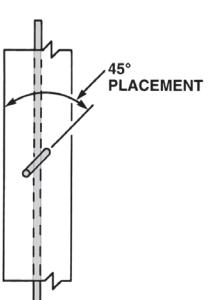
ANCHOR DOWN STK NO	2X, 3X, 2-X SILL PLATES	
	MONO - POUR	TWO - POUR
AD2B-G	KCAB16	KCAB20
AD5B-G	KCAB20	KCAB24
AD6A-G	KCAB28	KCAB34
AD8A-G	KCAB28	KCAB34
AD10A-G	KCAB28	KCAB34



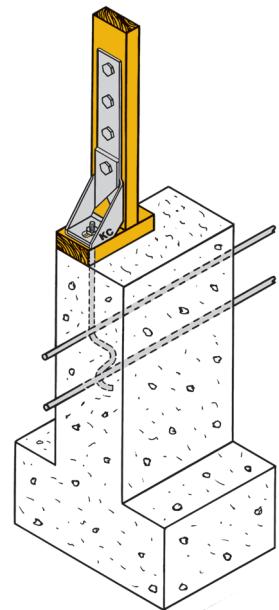
END WALL CONDITION



CORNER CONDITION

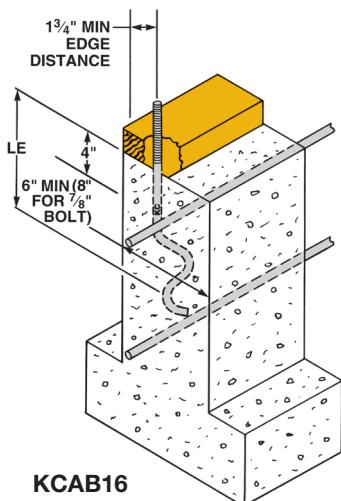


CONTINUOUS STEM WALL CONDITION

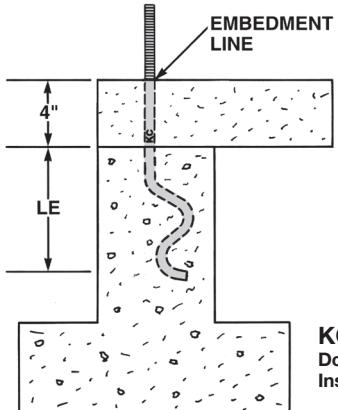


AD10A-G
(Shown with KCAB)

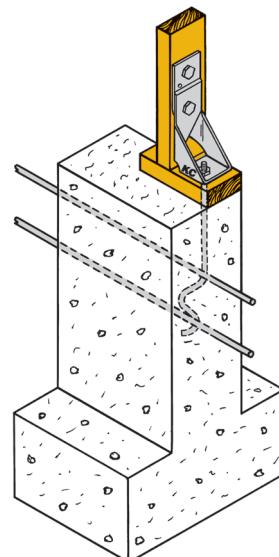
KCAB AND REBAR PLACEMENT



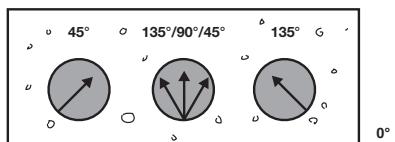
KCAB16



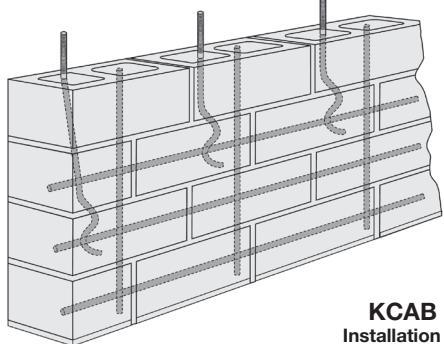
KCAB16
Double Pour
Installation



AD5B-G
(Shown with KCAB)



Plan View of KCAB Placement in Concrete Stemwall



KCAB
Installation in Grouted Concrete Block

SUPERSPEED® SHEAR WALLS

SSW

SCREW TYPE ANCHOR DOWNS

Design Features . . heavy gage load transfer plate reduces anchor down deflection . . improved connection using screws instead of bolts . . special screws have been tested and are included with **SSW** . . galvanized steel for corrosion resistance . . designed to easily fit on a 4x post . . flat base makes for easier installation.

The new **SUPERSPEED®** Shear Wall combining high load capacity and minimizes deflection under load. With the use of a unique load transfer plate which is formed and pressed into the body of the anchor down creating a one piece structural unit.

SSW-SDS3 15KIPS

Material . . 7 ga. galvanized steel . . **SSW**

$\frac{3}{8}$ " x 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " sq. washer hot dipped galvanized.

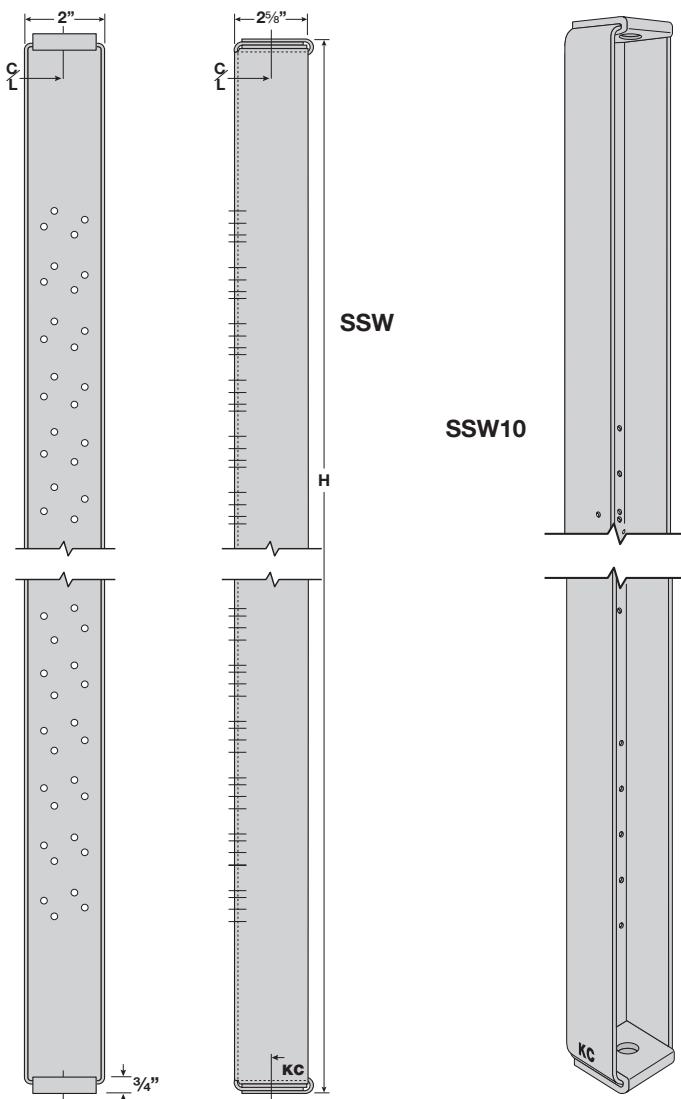
Finish . . Galvanized steel

Special . . **KC® SUPERSPEED®** Drive Screws are best installed with a low speed, or variable speed. $\frac{1}{2}$ " drill and a $\frac{3}{8}$ " hex head driver.

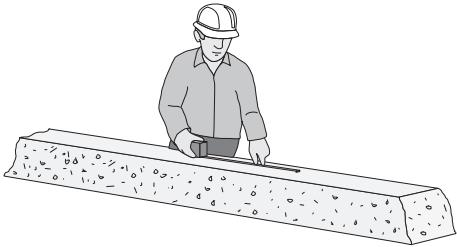
Loads . . design loads are based on capacity of special screws (**KC® SUPERSPEED®** Drive Screws) $\frac{1}{4}$ " x 3 inch of 500 pounds each @ 133% duration. Nails or lag screws cannot be substituted and achieve the listed design loads.

Special . . **KC® SUPERSPEED®** Drive Screws are furnished with the **SSW** Shear Wall for **SUPERSPEED®** labor saving installation.

Anchor bolt nuts should be finger tight plus 1/2 to 1/3 turn with a wrench as stated by ASTM test standards for anchor bolts.



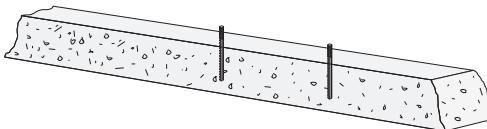
The **NEW** full height "SSW" **SUPERSPEED®** Shear Wall manufactured by **KC® Metal Products**, give the professional framer **SUPERSPEED®** easy field assembly of shear walls both standard and special widths. each "SSW", shear wall has a tested capacity of 15,000 pounds in both tension and compression. No more adjusting window and door openings to accomodate pre-manufactured shear walls.



Installation 1

Layout for anchor bolt placement.

Note: Verify width to heighth ratio per current code.



Installation 2

Install 7/8" diameter anchor bolt into foundation at time concrete is poured per designer.

Note: Foundation and anchor bolt configuration is designer's responsibility.

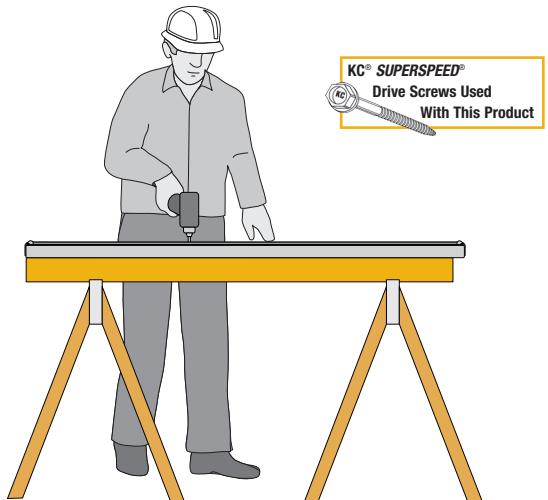
SUPERSPEED® SHEAR WALLS

www.kcmetals.com

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

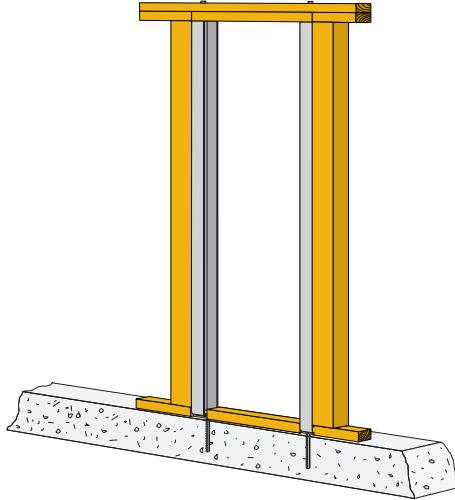
SSW

KC® STK NO	HEIGHT (INCHES)	DIA (INCHES)	NUMBER OF BOLTS IN TOP OF WALL	FASTENER SCHEDULE			DESIGN LOAD (LBS)	DEFLECTION OF DESIGN LOAD (INCHES)	DEFLECTION OF DESIGN LOAD (INCHES)	DEFLECTION OF DESIGN LOAD (INCHES)
				ANCHOR BOLTS DIAMETER (INCHES)	CENTER LINE DIMENSIONS	KC® SUPERSPEED® SDS 1/4 x 3 DRIVE SCREWS				
SSW 7	78	7 GA	2 - 7/8 MB	12	1 1/2	60	15560	.070	.073	.080
SSW 8	93 1/4	7 GA	2 - 7/8 MB	16	1 1/2	60	15560	.070	.073	.080
SSW 9	105 1/4	7 GA	2 - 7/8 MB	20	1 1/2	60	15560	.0700	.073	.080
SSW 10	117 1/4	7 GA	2 - 7/8 MB	24	1 1/2	60	15560	.070	.073	.080
SSW 12	141 1/4	7 GA	2 - 7/8 MB	26	1 1/2	60	15560	.070	.073	.080



Installation 3

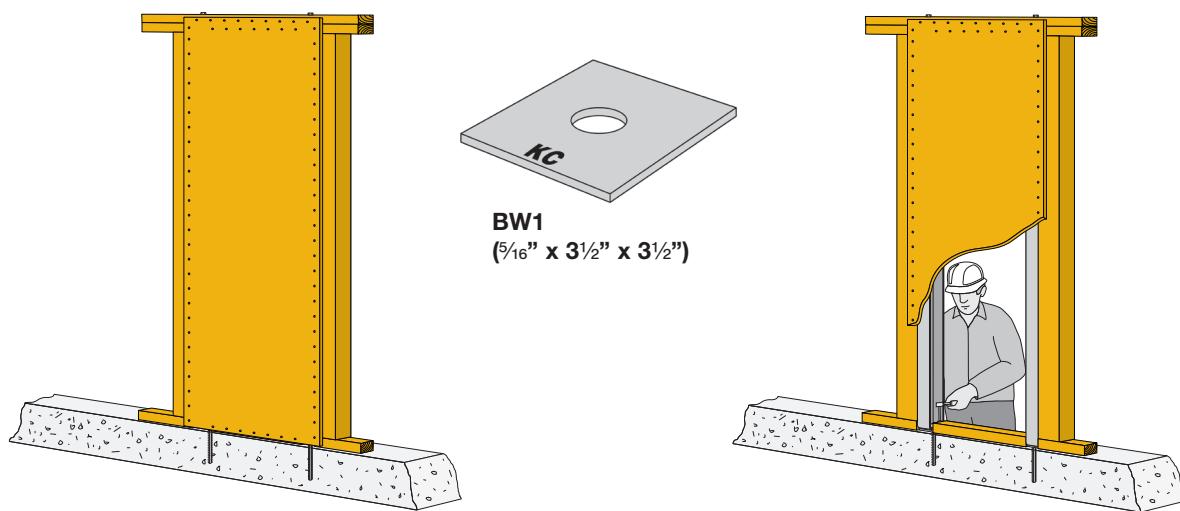
Using variable speed drill, install "SSW" Shear Wall standards to wood framing posts with provided KC® SUPERSPEED® SDS 1/4 x 3 drive screws. Install screws using a 1/2" drive variable speed drill, 5.5 amps or larger and a 3/8" hex head driver.



Installation 4

Install SSW Shear Wall with attached posts along with regular framing. Square walls and nail shear panels prior to tightening anchor bolt nuts.

Note: Install standards on each side of shear wall. Bolt through top plates with 7/8" diameter machine bolt and 2-BW 7/8 plate washer.



Installation 5

Install siding and/or plywood and nail as specified.

Note: Frame shear wall with minimum 1 - 4 x 4 against each standard.

Anchor bolt nuts should be finger tight. With a wrench, tighten anchor bolt nuts 1/3 - 1/2 turn after nut contacts with KCMP "SSW" as stated by ASTH test standards for anchor bolts. Consider possible wood shrinkage.



METALS PRODUCTS, INC.
SUPERSPEED® CONNECTORS

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SUPERSPEED® EMBOSSED TIE STRAPS

TS SS

EMBOSSED TIE STRAPS

Design Features . . . The **TS SS** and **3XTS SS** straps are designed to transfer tension forces between two framing members using nails. The **TS Series** are designed for use with a nominal 4X framing member and the **3XTS** are designed for use with a nominal 3X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.

The **MTS SS**, **3XMTS SS** and **MTSI SS** straps are designed to transfer tension forces between framing members using nails. The **MTS** series are designed for use with a nominal 4X framing member and the **3XMTS** are designed for use with a nominal 3X framing member. The **MTSI** series are designed with a nail pattern to accommodate various composite wood I-Joist products. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.



NO HAMMER™

It all started with a simple idea of forming an embossment around each metal connector nail hole. The embossment, along with the proper nail gun nose adapter, aligns many commonly used nail guns over the metal connector nail holes. Installing these connectors with a nail gun makes installation up to five times faster than the old style hand nail connectors.

Material . . . 16 ga, 14 ga, 12 ga, and 10 ga. galvanized steel.

Special . . . It all started with a simple idea of forming an embossment around each metal connector nail hole. The embossment, along with the proper nail gun nose adapter, aligns many commonly used nail guns over the metal connector nail holes. Installing these connectors with a nail gun makes installation up to five times faster than the old style hand nail connectors.

Material . . . 16 ga, 14 ga, 12 ga, and 10 ga. galvanized steel.

INSTALLATION SAFETY NOTE:

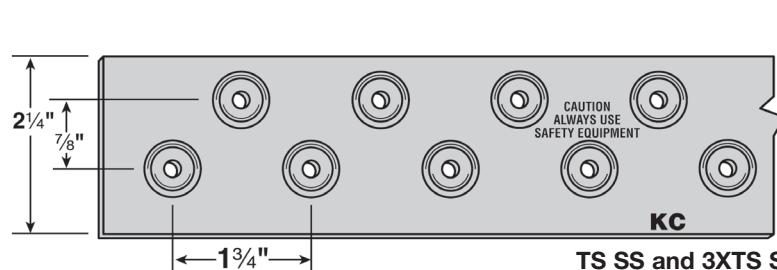
Important

Pneumatic or power-actuated fasteners may deflect and injure the operator or others. Nail guns may be used to install connectors, provided the correct quantity and type of nails are properly installed in the nail holes. Guns with nail hole locating mechanisms should be used. Follow the manufacturer's instructions and use the appropriate safety equipment.

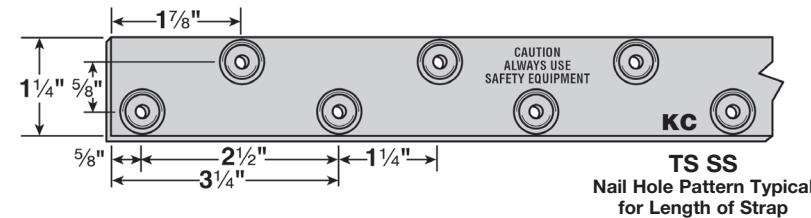
FLOOR-TO-FLOOR CLEAR SPAN TABLE

KC® STK NO	CLEAR SPAN	TOTAL # NAILS	DESIGN LOAD TENSION (LBS)
			133%
MTSC28	18	12-16d Sinker	925
	16	16-16d Sinker	1230
MTSC40	18	28-16d Sinker	2155
	16	32-16d Sinker	2460
MTSC52	18	44-16d Sinker	3385
	16	48-16d Sinker	3695
MTSC66	18	64-16d Sinker	5035
	16	68-16d Sinker	5350
MTSC78	18	80-16d Sinker	6295
	16	82-16d Sinker	6450
MTS37	18	20-16d	1930
	16	22-16d	2125
MTS48	18	32-16d	3135
	16	34-16d	3330
MTS60	18	46-16d	4810
	16	48-16d	5020
MTS72	18	56-16d	5850
	16	56-16d	5850
MTSI36	18	14-10d x 1½"	900
	16	16-10d x 1½"	1030
MTSI48	18	26-10d x 1½"	1675
	16	28-10d x 1½"	1805
MTSI60	18	38-10d x 1½"	2450
	16	40-10d x 1½"	2580
MTSI72	18	50-10d x 1½"	3220
	16	52-10d x 1½"	3350

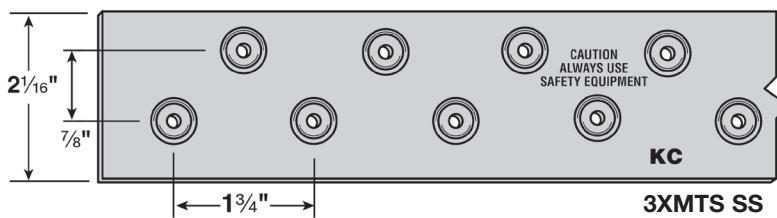
(See Page 91 for Design Loads)



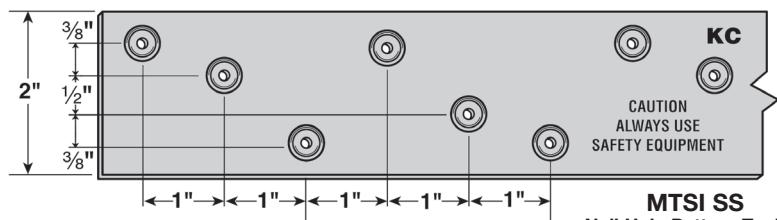
TS SS and 3XTS SS
Nail Hole Pattern Typical
for Length of Strap



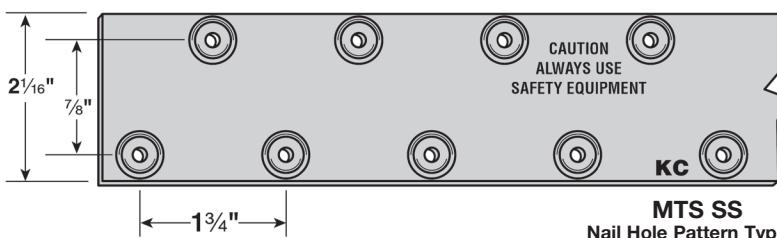
TS SS
Nail Hole Pattern Typical
for Length of Strap



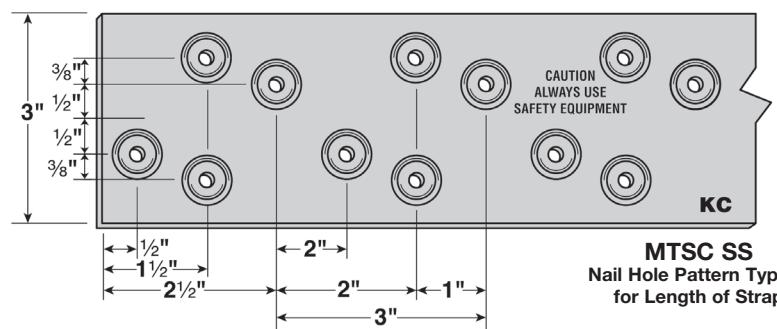
3XMTS SS
Nail Hole Pattern Typical
for Length of Strap



MTSI SS
Nail Hole Pattern Typical
for Length of Strap



MTS SS
Nail Hole Pattern Typical
for Length of Strap



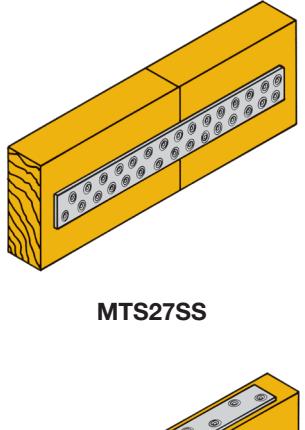
MTSC SS
Nail Hole Pattern Typical
for Length of Strap

SUPERSPEED® EMBOSSED TIE STRAPS

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	WIDTH/LENGTH MATERIAL	TOTAL # NAILS	DESIGN LOAD (LBS)		NET SECTION LOAD	DESIGN LOAD (LBS)		
			NAIL	LOAD (100%)		NAIL USED	(100%)	(133%)
TS17SS (embossed)	2 $\frac{1}{4}$ " x 21" 16 ga gal	24	10d	123	3950 lbs @ 100% Duration	10d	1480	1970
			16d	147		16d	1765	2350
			10d Hardened	176		10d Hardened	2115	2815
			16d Hardened	210		16d Hardened	2520	3350
			10d	123		10d	1850	2460
			16d	147		16d	2205	2935
TS24SS (embossed)	2 $\frac{1}{4}$ " x 26 $\frac{1}{4}$ " 16 ga gal	30	10d Hardened	175	3950 lbs @ 100% Duration	10d Hardened	2645	3520
			16d Hardened	210		16d Hardened	3150	3950
			10d	128		10d	2700	3590
			16d	154		16d	3225	4290
TS36SS (embossed)	2 $\frac{1}{4}$ " x 36 $\frac{3}{4}$ " 14 ga gal	42	10d Hardened	180	4800 lbs @ 100% Duration	10d Hardened	3790	4800
			16d Hardened	213		16d Hardened	4490	4800
			10d	123		10d	1480	1970
			16d	147		16d	1765	2350
3XTS17SS (embossed)	2 $\frac{1}{4}$ " x 21" 16 ga gal	24	10d Hardened	176	3950 lbs @ 100% Duration	10d Hardened	2115	2815
			16d Hardened	210		16d Hardened	2520	3350
			10d	123		10d	1850	2460
			16d	147		16d	2205	2935
3XTS24SS (embossed)	2 $\frac{1}{4}$ " x 26 $\frac{1}{4}$ " 16 ga gal	30	10d Hardened	176	3950 lbs @ 100% Duration	10d Hardened	2645	3520
			16d Hardened	210		16d Hardened	3150	3950
			10d	128		10d	2700	3590
			16d	154		16d	3225	4290
3XTS36SS (embossed)	2 $\frac{1}{4}$ " x 36 $\frac{3}{4}$ " 14 ga gal	42	10d Hardened	180	4800 lbs @ 100% Duration	10d Hardened	3790	4800
			16d Hardened	213		16d Hardened	4490	4800
			10d	141		10d	2120	2820
			16d	164		16d	2455	3265
MTS27SS (embossed)	2 $\frac{1}{16}$ " x 26 $\frac{1}{4}$ " 12 ga gal	30	10d Hardened	187	5345 lbs @ 100% Duration	10d Hardened	2805	3730
			16d Hardened	220		16d Hardened	3300	4390
			10d	141		10d	2970	3950
			16d	164		16d	3440	4575
MTS37SS (embossed)	2 $\frac{1}{16}$ " x 37 $\frac{1}{2}$ " 12 ga gal	42	10d Hardened	187	5345 lbs @ 100% Duration	10d Hardened	3925	5225
			16d Hardened	220		16d Hardened	4620	5345
			10d	141		10d	3815	5075
			16d	164		16d	4420	5345
MTS48SS (embossed)	2 $\frac{1}{16}$ " x 47 $\frac{1}{4}$ " 12 ga gal	54	10d Hardened	187	5345 lbs @ 100% Duration	10d Hardened	5050	5345
			16d Hardened	220		16d Hardened	5345	5345
			10d	158		10d	5215	6935
			16d	181		16d	5975	6980
MTS60SS (embossed)	2 $\frac{1}{16}$ " x 57 $\frac{3}{4}$ " 10 ga gal	66	10d Hardened	199	6980 lbs @ 100% Duration	10d Hardened	6575	6980
			16d Hardened	232		16d Hardened	6980	6980
			10d	158		10d	6165	6980
			16d	181		16d	6980	6980
MTS72SS (embossed)	2 $\frac{1}{16}$ " x 68 $\frac{1}{4}$ " 10 ga gal	78	10d Hardened	199	6980 lbs @ 100% Duration	10d Hardened	6980	6980
			16d Hardened	232		16d Hardened	6980	6980
			10d	141		10d	2120	2820
			16d	164		16d	2455	3265
3XMTS27SS (embossed)	2 $\frac{1}{16}$ " x 26 $\frac{1}{4}$ " 12 ga gal	30	10d Hardened	187	5345 lbs @ 100% Duration	10d Hardened	2805	3730
			16d Hardened	220		16d Hardened	3300	4390
			10d	141		10d	2970	3950
			16d	164		16d	3440	4575
3XMTS37SS (embossed)	2 $\frac{1}{16}$ " x 36 $\frac{3}{4}$ " 12 ga gal	42	10d Hardened	187	5345 lbs @ 100% Duration	10d Hardened	3925	5225
			16d Hardened	220		16d Hardened	4620	5345
			10d	141		10d	3815	5075
			16d	164		16d	4420	5345
3XMTS48SS (embossed)	2 $\frac{1}{16}$ " x 47 $\frac{1}{4}$ " 12 ga gal	54	10d Hardened	187	5345 lbs @ 100% Duration	10d Hardened	5050	5345
			16d Hardened	220		16d Hardened	5345	5345
			10d	158		10d	5215	6935
			16d	181		16d	5975	6980
3XMTS60SS (embossed)	2 $\frac{1}{16}$ " x 57 $\frac{3}{4}$ " 10 ga gal	66	10d Hardened	199	6980 lbs @ 100% Duration	10d Hardened	6575	6980
			16d Hardened	232		16d Hardened	6980	6980
			10d	158		10d	6165	6980
			16d	181		16d	6980	6980
3XMTS72SS (embossed)	2 $\frac{1}{16}$ " x 68 $\frac{1}{4}$ " 10 ga gal	78	10d Hardened	199	6980 lbs @ 100% Duration	10d Hardened	6980	6980
			16d Hardened	232		16d Hardened	6980	6980
			10d	141		10d	1840	2445
			10d	141		10d	1840	2445
MTS16SS (embossed)	2 $\frac{1}{16}$ " x 26" 12 ga gal	26	10d x 1 $\frac{1}{2}$	141	5345 lbs @ 100% Duration	10d x 1 $\frac{1}{2}$	2545	3385
			10d	141		10d	2545	3385
MTS136SS (embossed)	2 $\frac{1}{16}$ " x 36" 12 ga gal	36	10d x 1 $\frac{1}{2}$	141	5345 lbs @ 100% Duration	10d x 1 $\frac{1}{2}$	3395	4510
			10d	141		10d	3395	4510
MTS148SS (embossed)	2 $\frac{1}{16}$ " x 48" 12 ga gal	48	10d x 1 $\frac{1}{2}$	141	5345 lbs @ 100% Duration	10d x 1 $\frac{1}{2}$	395	4510
			10d	141		10d	395	4510
MTS160SS (embossed)	2 $\frac{1}{16}$ " x 60" 12 ga gal	60	10d x 1 $\frac{1}{2}$	141	5345 lbs @ 100% Duration	10d x 1 $\frac{1}{2}$	4240	5345
			10d	141		10d	4240	5345
MTS172SS (embossed)	2 $\frac{1}{16}$ " x 72" 10 ga gal	72	10d x 1 $\frac{1}{2}$	158	6980 lbs @ 100% Duration	10d x 1 $\frac{1}{2}$	5690	6980
			10d	158		10d	5690	6980

TS SS
3XTS SS
MTS SS
3XMTS SS
MTSI SS
MTSC SS



SUPERSPEED® EMBOSSED DIAPHRAGM STRAPS

CNS
3XCNS
CNSI
CNS KIP
3XCNS KIP

CALIFORNIA NAIL STRAPS EMBOSSED TIE STRAPS AND DIAPHRAGM STRAPS

Design Features . . The **CNS** and **3XCNS** straps are designed to transfer tension forces between framing members using nails. The **CNS** series are designed for use with a nominal 4X framing member and the **3XCNS** are designed for use with a nominal 3X framing member. The **CNSI** series are designed with a nail pattern to accommodate various wood I-Joist products. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.

The **CNS KIP** and **3XCNS KIP** straps are designed to transfer tension forces between two framing members using nails. The **CNS KIP** series are designed for use with a nominal 4X framing member and the **3XCNS KIP** are designed for use with a nominal 3X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired. This series of straps are designed for use with hardened steel gun nails, blending yield strength of 200Ksi, readily available to the roof erectors.

The **CNS KIP** and **3XCNS KIP** straps are designed primarily for use on horizontal diaphragms. The heavy gage steel combined with a wide cross section and use of hardened gun nails gives much higher loads than other available straps. All products are embossed for use with nail guns. Embossing not only guides the nail into the strap opening, but surrounds the nail head, greatly reducing the potential for tearing of the roofing materials minimizing potential leaks.



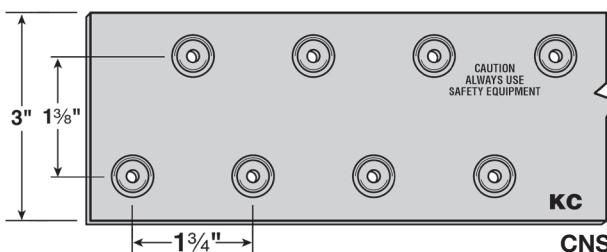
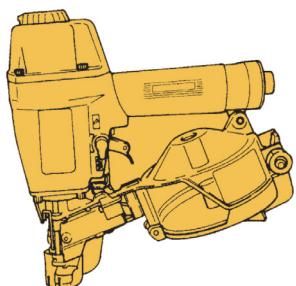
NO HAMMER™
It all started with a simple idea of forming an embossment around each metal connector nail hole. The embossment, along with the proper nail gun nose adapter, aligns many commonly used nail guns over the metal connector nail holes. Installing these connectors with a nail gun makes installation up to five times faster than the old style hand nail connectors.

Material . . 12 ga. and 10 ga. galvanized steel. Specially ordered high yield strength galvanized steel.

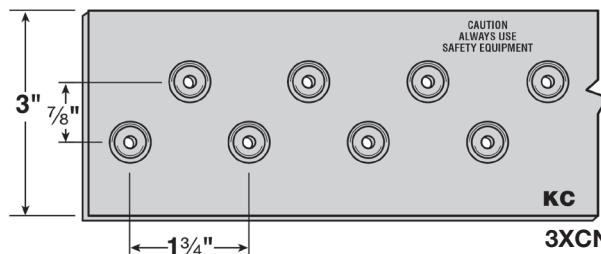
⊕ INSTALLATION SAFETY NOTE:

Important

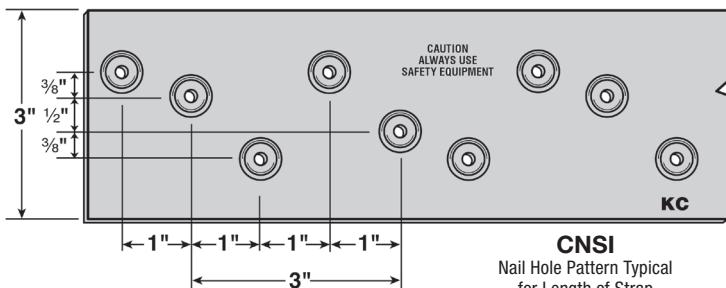
Pneumatic or power-actuated fasteners may deflect and injure the operator or others. Nail guns may be used to install connectors, provided the correct quantity and type of nails are properly installed in the nail holes. Guns with nail hole locating mechanisms should be used. Follow the manufacturer's instructions and use the appropriate safety equipment.



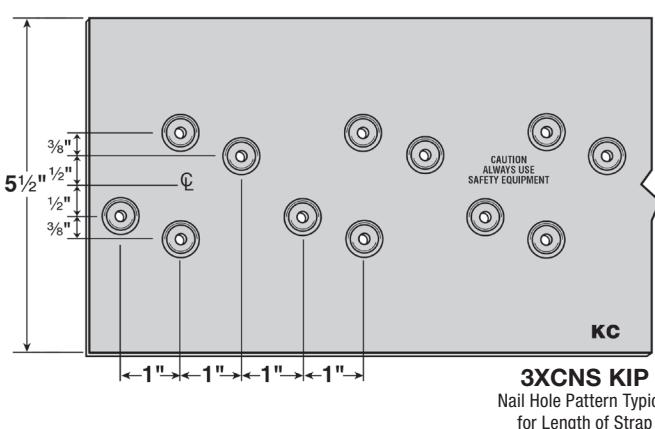
CNS
Nail Hole Pattern Typical
for Length of Strap



3XCNS
Nail Hole Pattern Typical
for Length of Strap

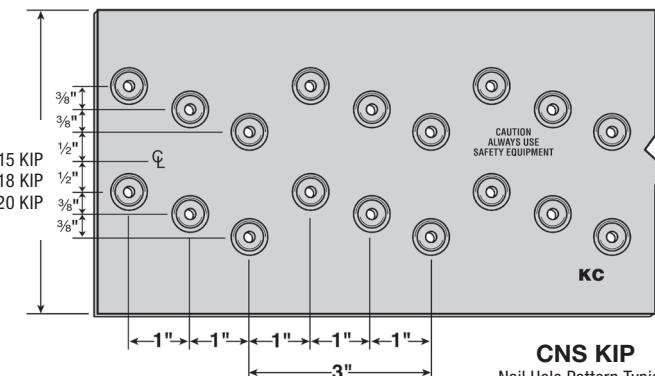


CNSI
Nail Hole Pattern Typical
for Length of Strap



Minimum
3X Framing
Member

3XCNS KIP
Nail Hole Pattern Typical
for Length of Strap



Minimum
4X Framing
Member

CNS KIP
Nail Hole Pattern Typical
for Length of Strap

SUPERSPEED® EMBOSSED DIAPHRAGM STRAPS

www.kcmetals.com

CNS
3XCNS
CNSI
CNS KIP
3XCNS KIP

For Product Substitutions . . . the ONLY APPROVED EQUAL™

KC® STK NO	WIDTH/LENGTH MATERIAL (INCHES)	TOTAL # NAILS	DESIGN LOAD (LBS)		NET SECTION LOAD	DESIGN LOAD (LBS)		
			NAIL	LOAD (100%)		NAIL USED	(100%)	(133%)
CNS48 (embossed)	3" x 48" 12 ga gal	54	10d	141	7785 lbs @ 100% Duration	10d	3815	5075
			16d	164		16d	4420	5880
			10d Hardened	187		10d Hardened	5050	6715
			16d Hardened	220		16d Hardened	5945	7785
			10d	141		10d	4805	6395
CNS60 (embossed)	3" x 60½" 12 ga gal	68	16d	164	7785 lbs @ 100% Duration	16d	5570	7405
			10d Hardened	187		10d Hardened	6360	7785
			16d Hardened	220		16d Hardened	7485	7785
			10d	158		10d	6320	8410
CNS72 (embossed)	3" x 72" 10 ga gal	80	16d	181	10165 lbs @ 100% Duration	16d	7240	9610
			10d Hardened	199		10d Hardened	7995	10165
			16d Hardened	232		16d Hardened	9300	10165
			10d	158		10d	8535	10165
CNS96 (embossed)	3" x 96" 10 ga gal	108	16d	181	10165 lbs @ 100% Duration	16d	9775	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
			10d	158		10d	9960	10165
CNS112 (embossed)	3" x 112" 10 ga gal	126	16d	181	10165 lbs @ 100% Duration	16d	10165	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
			10d	141		10d	3815	5075
3XCNS48 (embossed)	3" x 47¼" 12 ga gal	54	16d	164	7785 lbs @ 100% Duration	16d	4420	5880
			10d Hardened	187		10d Hardened	5050	6715
			16d Hardened	220		16d Hardened	5945	7785
			10d	141		10d	4665	6205
3XCNS60 (embossed)	3" x 57¾" 12 ga gal	66	16d	164	7785 lbs @ 100% Duration	16d	5405	7190
			10d Hardened	187		10d Hardened	6170	7785
			16d Hardened	220		16d Hardened	7265	7785
			10d	158		10d	6640	8830
3XCNS72 (embossed)	3" x 73½" 10 ga gal	84	16d	181	10165 lbs @ 100% Duration	16d	7605	10110
			10d Hardened	199		10d Hardened	8370	10165
			16d Hardened	232		16d Hardened	9765	10165
			10d	158		10d	8535	10165
3XCNS96 (embossed)	3" x 94½" 10 ga gal	108	16d	181	10165 lbs @ 100% Duration	16d	9775	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
			10d	158		10d	9960	10165
3XCNS112 (embossed)	3" x 110¼" 10 ga gal	126	16d	181	10165 lbs @ 100% Duration	16d	10165	10165
			10d Hardened	199		10d Hardened	10165	10165
			16d Hardened	232		16d Hardened	10165	10165
			10d	158		10d	3395	4510
CNS148 (embossed)	3" x 48" 12 ga gal	48	10d	141	7785 lbs @ 100% Duration	10d	3395	4510
			16d	164		16d	3930	5230
			10d Hardened	187		10d Hardened	4490	5970
			16d Hardened	220		16d Hardened	5285	7025
CNSI60 (embossed)	3" x 60" 12 ga gal	60	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	4240	5640
			10d	141		10d	4240	5640
			16d	164		16d	4915	6535
			10d Hardened	187		10d Hardened	5610	7460
			16d Hardened	220		16d Hardened	6605	7785
CNSI72 (embossed)	3" x 72" 12 ga gal	72	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	5090	6770
			10d	141		10d	5090	6770
			16d	164		16d	5895	7785
			10d Hardened	187		10d Hardened	6730	7785
			16d Hardened	220		16d Hardened	7785	7785
CNSI132 (embossed)	3" x 90" 12 ga gal	90	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	6360	7785
			10d	141		10d	6360	7785
			16d	164		16d	7370	7785
			10d Hardened	187		10d Hardened	7785	7785
			16d Hardened	220		16d Hardened	7785	7785
CNSI32 (embossed)	3" x 132" 12 ga gal	132	10d x 1½	141	7785 lbs @ 100% Duration	10d x 1½	7785	7785
			10d	141		10d	7785	7785
			16d	164		16d	7785	7785
			10d Hardened	187		10d Hardened	7785	7785
			16d Hardened	220		16d Hardened	7785	7785

STRAP DETAILS				NAIL SPECS		TOTAL NAILS	(100%) NET SECTION LOAD (LBS)	DESIGN LOAD (LBS)							
KC® STK NO	STEEL GAGE	STRAP SIZE	CROSS SECTION	NAIL	LOAD (LBS)			NO CLEAR SPAN		6" CLEAR SPAN		12" CLEAR SPAN			
								(100%)	(133%)	(100%)	(133%)	(100%)	(133%)		
CNS10KIP	12 Gage	5½" x 54"	.55 Sq Inch	10d Hard	187	108	14270	10095	13430	8970	11930	7850	10440		
				16d Hard	220			11885	14270	10560	14045	9245	12295		
CNS12KIP	12 Gage	5½" x 60"	.55 Sq Inch	10d Hard	187	120	14270	11220	14270	10100	13435	8975	11935		
				16d Hard	220			13205	14270	11885	14270	10535	14050		
3XCNS10KIP	12 Gage	5½" x 78"	.55 Sq Inch	10d Hard	187	104	14270	9725	12930	8975	11935	8230	10945		
				16d Hard	220			11445	14270	10565	14050	9495	12625		
3XCNS12KIP	12 Gage	5½" x 90"	.55 Sq Inch	10d Hard	187	120	14270	11220	14270	10354	13770	9725	12935		
				16d Hard	220			13205	14270	12325	14270	11445	14270		
CNS15KIP	10 Gage	5½" x 72"	.68 Sq Inch	16d Hard	232	144	18635	16740	18635	15340	18635	13950	18550		
CNS18KIP	10 Gage	6½" x 90"	.82 Sq Inch	16d Hard	232	180	22025	20925	22025	20400	22025	18945	22025		
CNS20KIP	10 Gage	7½" x 96"	.95 Sq Inch	16d Hard	232	192	25415	22320	25415	20925	25415	19530	25415		

TIE STRAPS AND BRACING

TS

TIE STRAPS

TSA

LTS
TSI

Design Features . . provide the builder with a complete range of tie straps to meet a variety of application and design load conditions and specifications.

FHA

HPS

HTS

MTS

MTSI

MTSC

Series	Installation	Bolt Pattern	Material	Finish
LTS	Nails	—	20, 18, 16, or 14 ga	Galv.
TS/ TSA	Nails	—	18 ga	Galv.
LTSI	Nails or Bolts	Single	12 or 10 ga	Galv.
HTS	Bolts	Single or Double Row (Glu-lam Beams)	$\frac{3}{16}$ " or $\frac{1}{4}$ " Steel	SUPERSPEED® Gray
FHA	Nails	—	12 ga	Galv.
HPS	Bolts	Single or Double	7 ga	Galv.
MTSC	Nails	—	16 or 14 ga	Galv.

Applications . .

TS series – tying rafters and ridge beam together, securing rafters to plate, anchoring studs to sill, framing over girders and bearing portions, joining continuous headers at corners.

MTSI series – the strap is engineered with 3" nail spacing specifically for wood I-joints.

MTS series – designed to provide positive connections at wall intersections and ridge ties when top plates are cut. See Page 80 and 81 for **3X MTS** Straps for less than 4X members.

HTS series – designed for high stress situations.

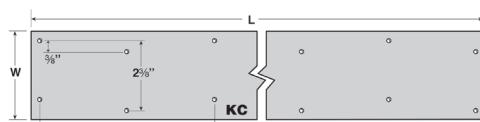
FHA series – approved multipurpose straps.

LTS/A/TS series – tie strap is designed for use on a 1½" member. The 3" center-to-center nail spacing reduces the possibility of wood splitting.

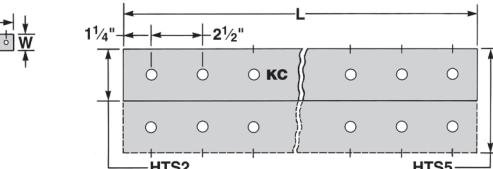
HPS series – This is a heavy piling strap which connects wood pilings to floor girders in elevated structures.

LTSI series – designed for attachment to open wood chord web trusses. The 6" on-center staggered spacing eliminates the chance for wood grain splitting. **Note . .** the **LTSI** is manufactured from 18 ga. galvanized steel which can be installed with air gun nailers. This eliminates the high labor cost of hand nailing.

MTSC series – nail holes are counter sunk for sinker nail heads offered in 2 different strap sizes of gage material. Counter sunk holes for lower profile nailing with 16d sinkers.

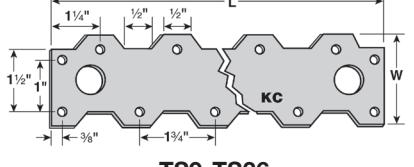


LTSI49 - LTSI73

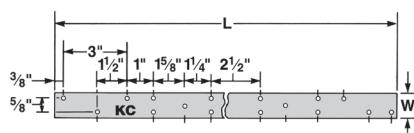


HTS2

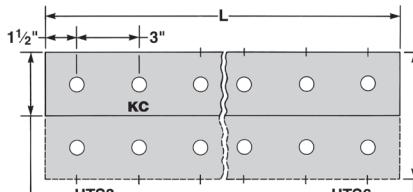
HTS5
(HPS418 Typical)



TS9 - TS36

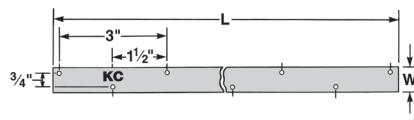


TS91 - TS221

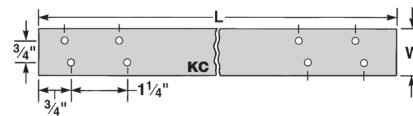


HTS3

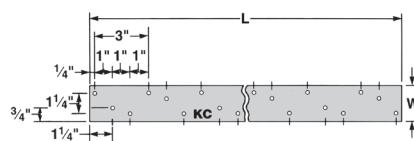
HTS6
(HPS720 Typical)



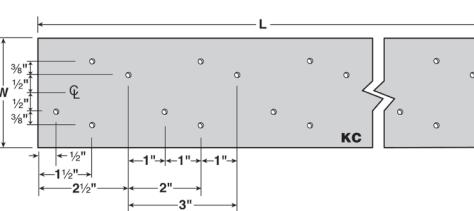
TSA9 - TSA36



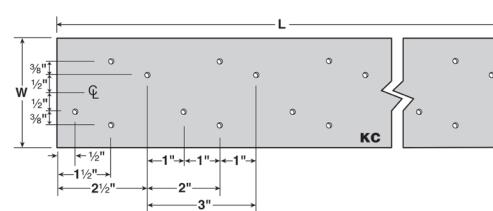
FHA9 - FHA30



MTSI26 - MTSI72



MTS27 - MTS72



MTSC28 - MTSC78

TW

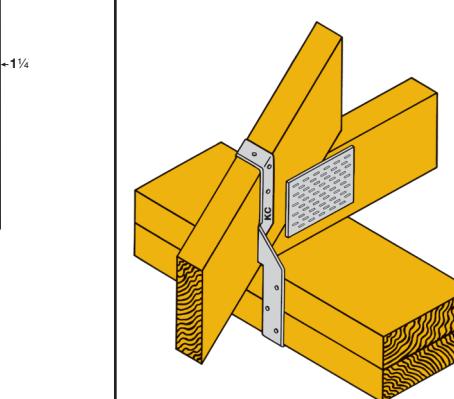
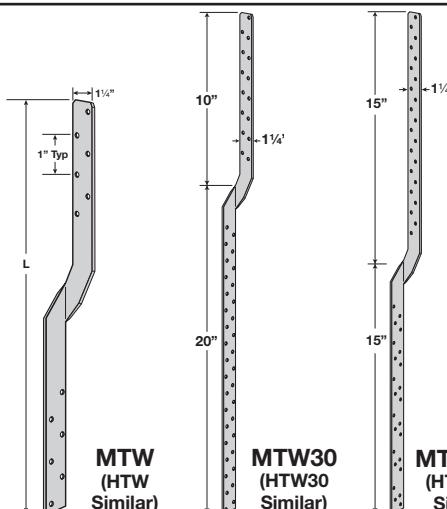
TWIST STRAPS

MTW

HTW

Design Features . . provide for fast, simple hanging of joists at right angles and for securing joists to a strongback. The 6" diagonal 90° bend in the middle of the strap permits nailing to the side of the supported joist and to the side of the crossing support member above it. **TWs** can be used singly or in pairs, depending upon load requirements. Equal number of right and left hand straps are supplied in each carton. For the **MTWs**, (supplied in pieces, not pairs), the 3" bend in the middle of the straps stops interference at the transition points.

Material . . **TW/MTW** – 16 ga. galvanized steel.
HTW – 14ga. galvanized steel.

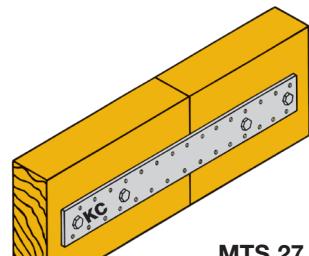


MTW16

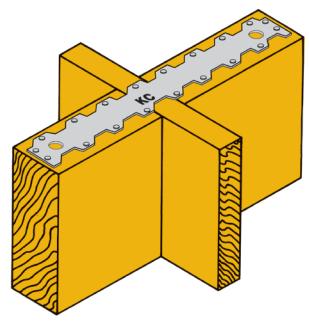
TIE STRAPS AND BRACING

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

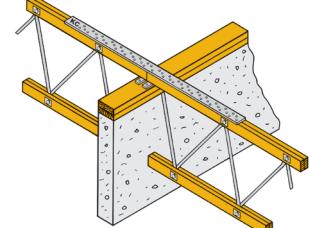
KC® STK NO	REF NO	MATERIAL (INCHES)	DIMENSIONS (INCHES)		NAIL & BOLT SCHEDULE	DESIGN LOAD (NAILS)		DESIGN LOAD (BOLTS)	
			W	L		NORMAL LBS	MAX LBS	NORMAL LBS	MAX LBS
TS9	ST292	20 ga gal	2 $\frac{1}{16}$	9 $\frac{1}{4}$	12-16d	—	—	1330	—
TS12	ST2122	20 ga gal	2 $\frac{1}{16}$	12 $\frac{1}{4}$	16-16d	—	—	1775	—
TS1720	ST2215	20 ga gal	2 $\frac{1}{16}$	16 $\frac{1}{4}$	20-16d	—	—	1875	—
TS17	ST6215	16 ga gal	2 $\frac{1}{16}$	16 $\frac{1}{4}$	20-16d	—	—	2280	—
TS24	ST6224	16 ga gal	2 $\frac{1}{16}$	23 $\frac{1}{4}$	29-16d	—	—	3060	—
TS36	ST6236	14 ga gal	2 $\frac{1}{16}$	33 $\frac{3}{4}$	40-16d	—	—	3875	—
TS91	ST9	16 ga gal	1 $\frac{1}{4}$	9	8-16d	—	—	915	—
TS121	ST12	16 ga gal	1 $\frac{1}{4}$	11 $\frac{1}{8}$	10-16d	—	—	1140	—
TS181	ST18	16 ga gal	1 $\frac{1}{4}$	17 $\frac{1}{4}$	14-16d	—	—	1595	—
TS221	ST22	16 ga gal	1 $\frac{1}{4}$	21 $\frac{1}{8}$	18-16d	—	—	1665	—
TS1734	ST2115	20 ga gal	3 $\frac{1}{4}$	17	12-16d	—	—	645	—
MTSI26	MSTI26	12 ga gal	2	26	26-10d x 1 $\frac{1}{2}$	—	—	2760	—
MTSI36	MSTI36	12 ga gal	2	36	36-10d x 1 $\frac{1}{2}$	—	—	3820	—
MTSI48	MSTI48	12 ga gal	2	48	48-10d x 1 $\frac{1}{2}$	—	—	5090	—
MTSI60	MSTI60	12 ga gal	2	60	60-10d x 1 $\frac{1}{2}$	—	—	5315	—
MTSI72	MSTI72	12 ga gal	2	72	72-10d x 1 $\frac{1}{2}$	—	—	5315	—
MTS27	MST27	12 ga gal	2	27	30-16d	4- $\frac{1}{2}$ MB	—	3710	1355 1800
MTS37	MST37	12 ga gal	2	37 $\frac{1}{2}$	42-16d	6- $\frac{1}{2}$ MB	—	5195	1900 2525
MTS48	MST48	12 ga gal	2	48	50-16d	8- $\frac{1}{2}$ MB	—	5315	2305 3065
MTS60	MST60	10 ga gal	2 $\frac{1}{16}$	60	66-16d	8- $\frac{1}{2}$ MB	—	6955	2810 3740
MTS72	MST72	10 ga gal	2 $\frac{1}{16}$	72	66-16d	8- $\frac{1}{2}$ MB	—	6955	2810 3740
HTS2	HST2	$\frac{3}{16}$ stl	2 $\frac{1}{2}$	21 $\frac{1}{4}$	—	6- $\frac{3}{4}$ MB	—	3270	4350
HTS3	HST3	$\frac{1}{4}$ stl	3	25 $\frac{1}{2}$	—	6- $\frac{3}{4}$ MB	—	4810	6400
HTS5	HST5	$\frac{3}{16}$ stl	5	21 $\frac{1}{4}$	—	12- $\frac{3}{4}$ MB	—	6675	8875
HTS6	HST6	$\frac{1}{4}$ stl	6	25 $\frac{1}{2}$	—	12- $\frac{3}{4}$ MB	—	9625	12890
FHA6	FHA6	12 ga gal	1 $\frac{1}{16}$	6 $\frac{3}{8}$	8-16d	—	—	815	—
FHA9	FHA9	12 ga gal	1 $\frac{1}{16}$	9	8-16d	—	—	815	—
FHA12	FHA12	12 ga gal	1 $\frac{1}{16}$	11 $\frac{1}{8}$	8-16d	—	—	815	—
FHA18	FHA18	12 ga gal	1 $\frac{1}{16}$	17 $\frac{1}{4}$	8-16d	—	—	815	—
FHA24	FHA24	12 ga gal	1 $\frac{1}{16}$	23 $\frac{3}{8}$	8-16d	—	—	815	—
FHA30	FHA30	12 ga gal	1 $\frac{1}{16}$	30	8-16d	—	—	815	—
LSTA9	LSTA9	20 ga gal	1 $\frac{1}{4}$	9	8-10d	—	—	620	—
LSTA12	LSTA12	20 ga gal	1 $\frac{1}{4}$	12	10-10d	—	—	775	—
LSTA15	LSTA15	20 ga gal	1 $\frac{1}{4}$	15	12-10d	—	—	930	—
LSTA18	LSTA18	20 ga gal	1 $\frac{1}{4}$	18	14-10d	—	—	1085	—
LSTA21	LSTA21	20 ga gal	1 $\frac{1}{4}$	21	16-10d	—	—	1235	—
LSTA24	LSTA24	20 ga gal	1 $\frac{1}{4}$	24	18-10d	—	—	1235	—
LSTA30	LSTA30	18 ga gal	1 $\frac{1}{4}$	30	22-10d	—	—	1640	—
LSTA36	LSTA36	18 ga gal	1 $\frac{1}{4}$	36	26-10d	—	—	1640	—
TSA9	MSTA9	18 ga gal	1 $\frac{1}{4}$	9	8-16d	—	—	755	—
TSA12	MSTA12	18 ga gal	1 $\frac{1}{4}$	12	10-10d	—	—	940	—
TSA15	MSTA15	18 ga gal	1 $\frac{1}{4}$	15	12-10d	—	—	1130	—
TSA18	MSTA18	18 ga gal	1 $\frac{1}{4}$	18	14-10d	—	—	1315	—
TSA21	MSTA21	18 ga gal	1 $\frac{1}{4}$	21	16-10d	—	—	1505	—
TSA24	MSTA24	18 ga gal	1 $\frac{1}{4}$	24	18-10d	—	—	1665	—
TSA30	MSTA30	16 ga gal	1 $\frac{1}{4}$	30	22-10d	—	—	2075	—
TSA36	MSTA36	16 ga gal	1 $\frac{1}{4}$	36	26-10d	—	—	2075	—
HPS218	PS218	7 ga gal	2	18	—	4- $\frac{3}{4}$ MB	—	3185	4235
HPS418	PS418	7 ga gal	4	18	—	4- $\frac{3}{4}$ MB	—	3185	4235
HPS720	PS720	7 ga gal	7	20	—	8- $\frac{1}{2}$ MB	—	2305	3065
MTSC28	MSTC28	16 ga gal	3	28 $\frac{1}{4}$	36-16d Sinkers	—	—	3850	—
MTSC40	MSTC40	16 ga gal	3	40 $\frac{1}{4}$	52-16d Sinkers	—	—	5045	—
MTSC52	MSTC52	16 ga gal	3	52 $\frac{1}{4}$	62-16d Sinkers	—	—	5045	—
MTSC66	MSTC66	14 ga gal	3	65 $\frac{3}{4}$	76-16d Sinkers	—	—	6230	—
MTSC78	MSTC78	14 ga gal	3	77 $\frac{3}{4}$	76-16d Sinkers	—	—	6230	—
LTSI49	LSTI49	18 ga gal	3 $\frac{3}{4}$	49	32-10d x 1 $\frac{1}{2}$	—	—	2975	—
LTSI73	LSTI73	18 ga gal	3 $\frac{3}{4}$	73	48-10d x 1 $\frac{1}{2}$	—	—	4205	—



MTS 27



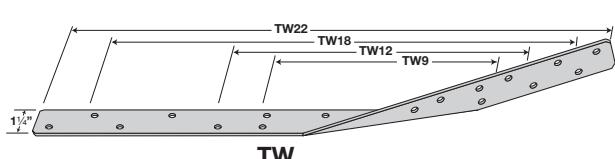
TS1720



LTSI73

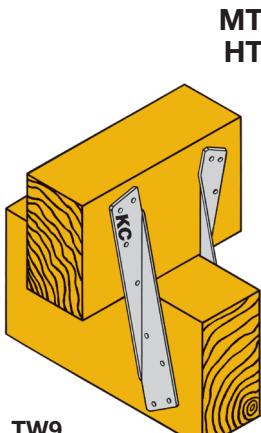
the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)	NAIL SCHEDULE	DESIGN LOAD (LBS)	
				L	
TW9	TS9	9	8-16d	540	
TW12	TS12	11 $\frac{1}{8}$	10-16d	675	
TW18	TS18	17 $\frac{1}{4}$	14-16d	945	
TW22	TS22	21 $\frac{1}{8}$	18-16d	1215	



the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)	NAIL SCHEDULE	DESIGN LOAD (LBS)	
				L	
MTW12	MTS12	12	14-10d	1050	
MTW16	MTS16	16	14-10d	1050	
MTW18	MTS18	18	14-10d	1050	
MTW20	MTS20	20	14-10d	1050	
MTW30	MTS30	30	14-10d	1050	
MTW30C	MTS30C	30	14-10d	1050	
HTW16	HTS16	16	16-10d	1260	
HTW20	HTS20	20	20-10d	1450	
HTW24	HTS24	24	20-10d	1450	
HTW28	HTS28	28	20-10d	1450	
HTW30	HTS30	30	20-10d	1450	
HTW30C	HTS30C	30	20-10d	1450	



TW9



MEALS PRODUCTS, INC.
SUPERSPEED® CONNECTORS

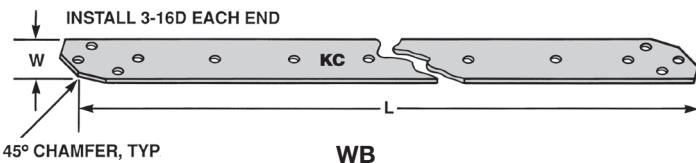
© Copyright KC® METAL PRODUCTS, INC.

WB WALL BRACING

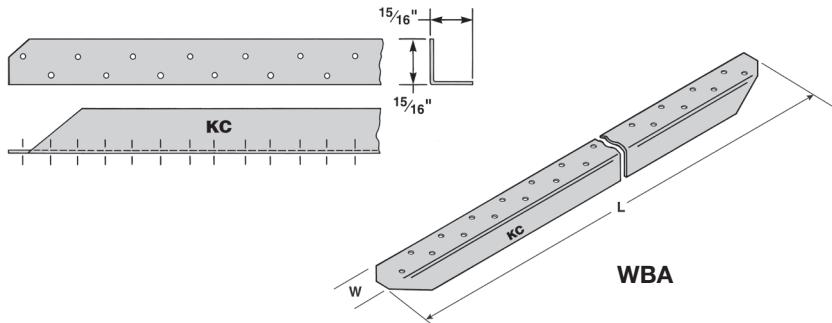
WBA **Design Features** . . for use on internal or external walls . . a faster and more economical method to prevent racking of walls . . eliminate cutting or "letting in" of wood braces . . installed in pairs, in a V-fashion with different lengths available upon request . . does not serve as a replacement for load-bearing shearwall components.

Material . . 16 and 18 ga. galvanized steel.

Evaluation . . code evaluated for value in tension equal to 1 x 4 let-in bracing.



WB



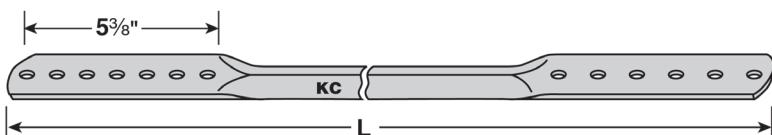
WBA

XB TENSION BRIDGING

Design Features . . provide the builder with an inexpensive, nail-type bridging for truss type wood I-joints. There are nine lengths from which to choose. All have seven nail holes per end, two of which must be used (4-10d).

Material . . XB, 18 ga. galvanized steel.

Special . . other sizes available are the **XB30**, **XB42**, **XB48**, **XB54**, **XB56** and **XB60**.



XB

RCS RETROFIT COIL STRAPS

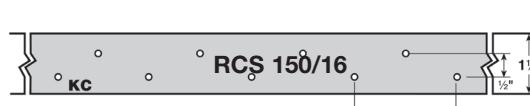
Design Features . . used to secure or wrap existing buildings for seismic upgrade, to tie water heaters to floors and walls and for utility purposes such as hanging pipes from rafters, studs or joists . . packaged in 16" X 16" carton.

Applications . . the **RCS3/40/12** provides a heavy-duty strap, while the **RCS3/52/14** gives you an optional medium-duty strap. All straps can be cut to length.

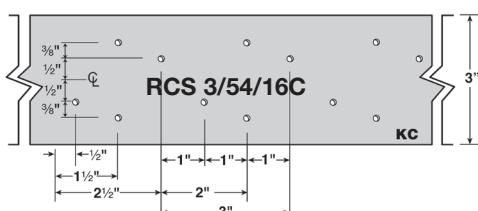
RCS3/54/16C nail holes are counter sunk to provide easy installation for 16d-sinkers for lower nailing profile. Triangle nail holes provide optional nailing for the **RCS 3/40/12**, and **RCS 3/52/14**.

Material . . 22ga., 20ga., 18ga., 16ga., 14ga. and 12 ga. galvanized steel.

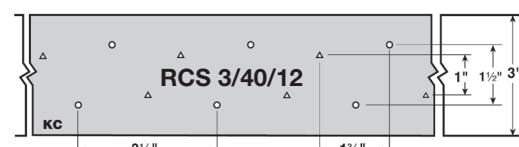
Note . . design loads are based on the assumption that one half of the specified number of nails are installed in each of the two members connected.



RCS 150/16
RCS 100/14
RCS 200/18
RCS 250/20
RCS 300/22



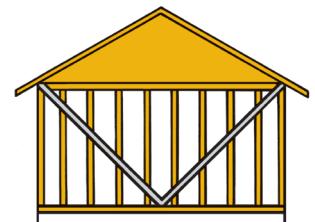
RCS 3/54/16C



RCS 3/40/12
RCS 3/52/14

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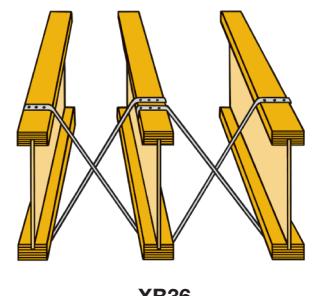
KC® STK NO	REF NO	MATERIAL	DIMENSIONS		NAIL SCHEDULE
			W	L	
WB10	WB106	16 ga gal	1 1/4"	9' 5 5/8"	1.4 o.c. - 8d
WB12	WB126	16 ga gal	1 1/4"	11' 3 3/8"	1.4 o.c. - 8d
WB14	WB146	16 ga gal	1 1/4"	14' 3"	1.4 o.c. - 8d
WBA10	CWB108	18 ga gal	13 1/16"	9' 3"	Each End 2 - 8d
WBA12	CWB126	18 ga gal		11' 3 3/4"	2 - 8d
WBA14	CWB146	18 ga gal		14' 3"	2 - 8d



WB12

For Product Substitutions . . . the ***ONLY APPROVED EQUAL™***
Tension Bridging for I-Joist

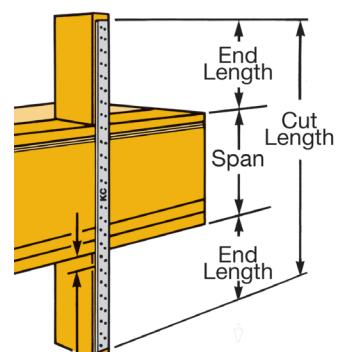
JOIST HEIGHT	JOIST SPACING (INCHES)								
	12	16	19.2	24	30	32	36	42	48
9 1/2"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
10"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
11 1/8"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
12"	XB20	XB27	XB27	XB30	XB36	XB36	XB42	XB48	XB54
14"	XB27	XB27	XB27	XB36	XB36	XB42	XB42	XB48	XB54
16"	XB27	XB27	XB30	XB36	XB42	XB42	XB42	XB48	XB54
18"	XB27	XB30	XB30	XB36	XB42	XB42	XB48	XB54	XB56
20"	XB30	XB30	XB36	XB36	XB42	XB42	XB48	XB54	XB56
22"	XB30	XB36	XB36	XB36	XB42	XB42	XB48	XB54	XB56
24"	XB36	XB36	XB36	XB42	XB42	XB48	XB48	XB54	XB56
26"	XB36	XB36	XB36	XB42	XB48	XB48	XB48	XB54	XB60
28"	XB36	XB36	XB42	XB42	XB48	XB48	XB54	XB54	XB60
30"	XB36	XB42	XB42	XB42	XB48	XB48	XB54	XB56	XB60
32"	XB42	XB42	XB42	XB42	XB48	XB48	XB54	XB56	XB60



XB36

For Product Substitutions . . . the ***ONLY APPROVED EQUAL™***

KC® STK NO	REF NO	MATERIAL	DIMENSIONS			NAIL SCHEDULE	DESIGN LOAD MAX LBS 160%	NAIL SPACING ON CENTER (IN A ROW)
			TOTAL LENGTH (FEET)	END LENGTH (INCHES)	CUT LENGTH (INCHES)			
RCS3/40/12	CMST12	12 ga gal	40	39	78 + Span	84-16d	9220	1 1/4
				89	178 + Span	100-10d		3 1/2
				178	356 + Span	100-10d		7
RCS3/52/14	CMST14	14 ga gal	52 1/2	30	60 + Span	66-16d	6490	1 1/4
				68	136 + Span	76-10d		3 1/2
				136	272 + Span	76-10d		7
RCS3/54/16C	CMSTC16	16 ga gal	54	23	46 + Span	56-16d Sinkers	5045	1 1/2
				45	90 + Span	56-16d Sinkers		3
RCS100/14	CS14	14 ga gal	100	16	32 + Span	30-10d	2550	2 1/16
RCS150/16	CS16	16 ga gal	150	14	28 + Span	28-8d	2070	2 1/16
				11	22 + Span	22-10d		
RCS200/18	CS18	18 ga gal	200	11	22 + Span	22-8d	1660	2 1/16
				9	18 + Span	18-10d		
RCS250/20	CS20	20 ga gal	250	9	18 + Span	18-8d	1250	2 1/16
				7	14 + Span	14-10d		
RCS300/22	CS22	22 ga gal	300	7	14 + Span	14-8d	1030	2 1/16
				5 1/2	11 + Span	12-10d		



Provides Code-Required Minimum End Distance: 7/8" for Douglas Fir and Larch Using 8d Nails

FOUNDATION HARDWARE

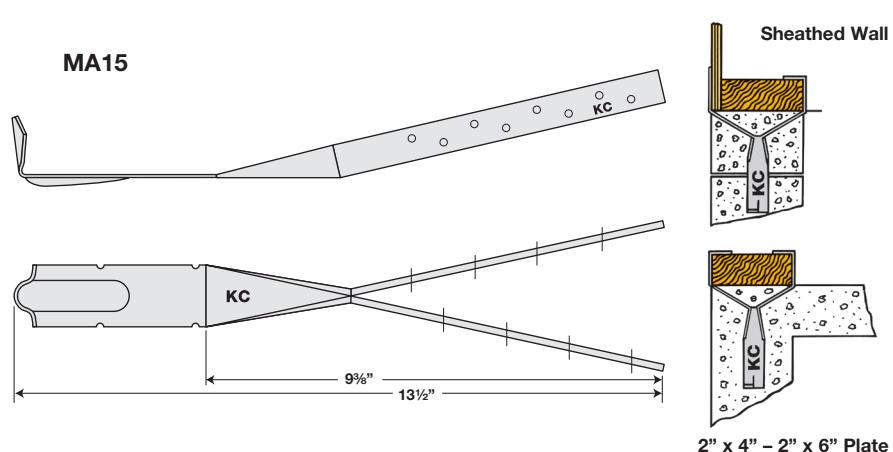
MA

MUDSILL ANCHORS

Design Features . . provide a faster, more economical and secure method for anchoring wood framing to masonry or concrete. MAs replace old-fashioned foundation bolts and nuts with a precision-formed anchor that can be pre-nailed to sill (for setting into screeded concrete) or positioned in concrete for easy addition of sill later. Complete flexibility is also provided by bendable top arms that can fit 2 x 4, 2 x 6 sills, or bent out of the way during construction. Design of anchors eliminates any movement due to shrinkage.

Not Designed for . . installation in slabs poured over concrete block foundation walls or use where a horizontal cold joint exists between the slab and the footing or the foundation beneath it.

Material . . 18 ga. galvanized steel.

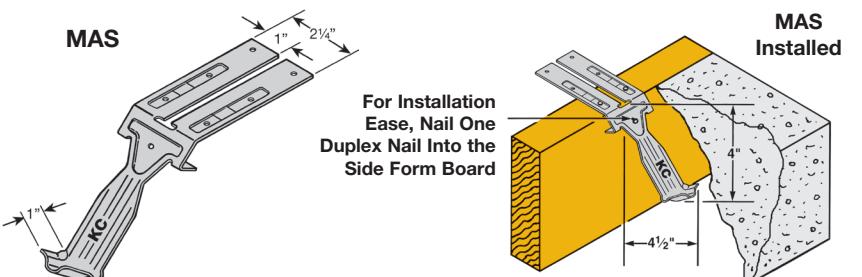


MAS

MUDSILL ANCHORS SINGLESIDE

Design Features . . install before pouring the concrete by nailing to the form or after the pour by inserting the MAS into the concrete. There is fast and simple nail attachment. Only six code-spaced nails are needed to drive into to the mudsill or directly to the stud (see MA above for more information).

Material . . 16 ga. galvanized steel.



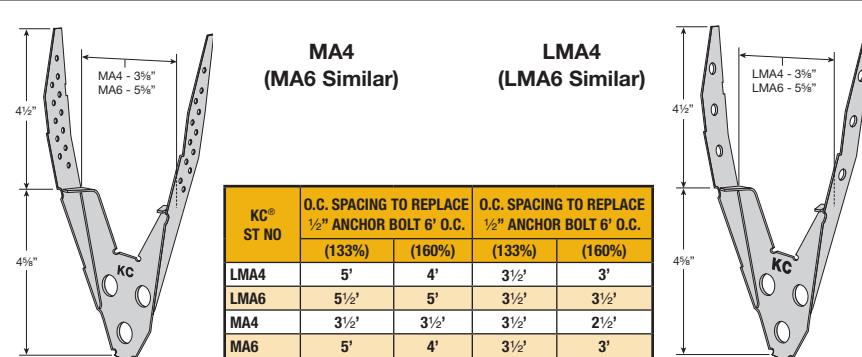
LMA

MUDSILL ANCHORS

MA4
MA6
Design Features . . replaces anchor bolts and washers. No special tools needed. Eliminates drilling into the sillplate. A low cost labor saver, high value method to secure wood mudsills to foundation walls or monolithic concrete slabs.

Special . . For perfect installation the easy depth gages are built into this model . . can be installed attached to sillplate or before sillplate placement.

Material . . LMA, 18 ga. galvanized steel; MA, 16 ga. galvanized steel.



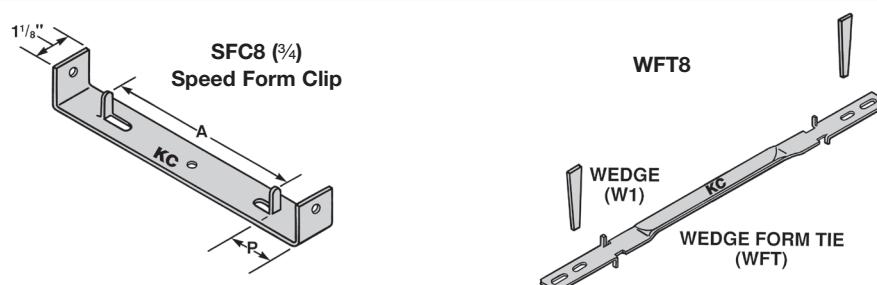
SFC

SPEED FORM CLIPS/ WEDGE FORM TIES

WFT
W
Design Features . . rigid, die-form design to assure a straight, true concrete wall without bulge or loss of concrete . . provide a faster form erection without nails (not recommended for use on walls over 4 feet high) . . the inside slot is for 1x lumber, the outside slot is for 2x lumber.

Material . . WFT, 18 ga. galvanized steel; SFC, 11 ga. steel.

Wedge . . 3 1/2" x 14 ga. galvanized steel.



GH

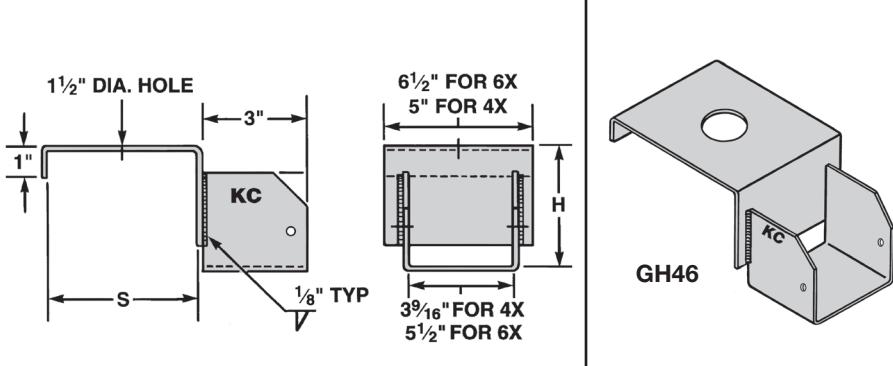
GHD

GIRDER HANGERS

Design Features . . provide sturdy support for floor girder beams using the concrete foundation wall as the supporting element . . eliminate need for pockets or inserts in the foundation wall . . no pier at the foundation wall is needed . . a 1 1/2" hole is provided in the top for a foundation bolt (not required for a design load) . . also available for 3x mudsill application. The girder hanger can be ordered for skewed conditions. H = girder height mudsill thickness.

Material . . 12 ga. steel.

Finish . . KC® SUPERSPEED® gray paint.



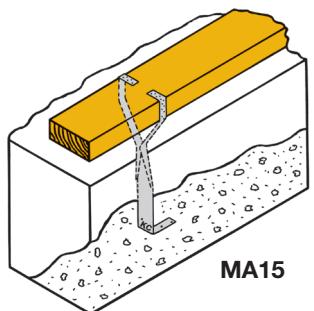
FOUNDATION HARDWARE

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For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL	PLATE MATERIAL	PLATE SIZE	DIMENSIONS (INCHES)		MAX SPACING (IN FEET)	NAIL SCHEDULE		DESIGN LOAD		
					L			MUDSILL TOP	MUDSILL SIDE	PARALLEL TO PLATE LBS	PERP TO PLATE LBS	UPWARD TENSION LBS
MA15	MAB	18 ga gal	Pressure Treated Coast Region Douglas Fir, Larch or Southern Pine	2 x 4	13½	3.25	4-10d x 1½	2-10d x 1½	510	500	570	
				2 x 6	13½	3.25	4-10d x 1½	2-10d x 1½	510	500	570	
			Foundation Grade Redwood	2 x 4	13½	3.25	4-10d x 1½	2-10d x 1½	410	410	455	
				2 x 6	13½	3.25	4-10d x 1½	2-10d x 1½	410	410	455	

MA15



For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL	PLATE MATERIAL	PLATE SIZE	MAX SPACING (IN FEET)	NAIL SCHEDULE		DESIGN LOAD		
						MUDSILL TOP	MUDSILL SIDE	PARALLEL TO PLATE LBS	PERP TO PLATE LBS	UPWARD TENSION LBS
MAS	MAS	16 ga gal	Pressure Treated Coast Region Douglas Fir, Larch or Southern Pine	2 x 4	4.5	4-10d x 1½	2-10d x 1½	720	940	990
				2 x 6	4.5	4-10d x 1½	2-10d x 1½	720	940	990
			Foundation Grade Redwood	2 x 8	3.5	2-10d x 1½	2-10d x 1½	720	940	990
				2 x 4	3.5	4-10d x 1½	2-10d x 1½	720	940	990
		16 ga gal	Foundation Grade Redwood	2 x 6	3.5	4-10d x 1½	2-10d x 1½	720	940	990
				2 x 8	2.5	2-10d x 1½	2-10d x 1½	720	940	990

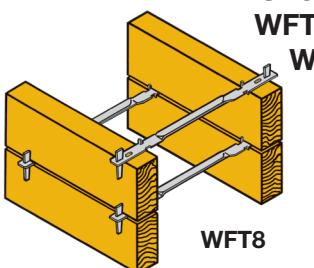
For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL	PLATE SIZE	O.C. SPACING TO REPLACE ANCHOR BOLT @ 6 FEET O.C.		NAIL SCHEDULE		DESIGN LOAD		
				ANCHOR BOLT		MUDSILL TOP	MUDSILL SIDE	PARALLEL TO PLATE	PERP TO PLATE LBS	UPWARD TENSION LBS
				1/2"	5/8"					
LMA4	LMA4	18	2 x 4	5 FT	3½ FT	4-10d x 1½	2-10d x 1½	730	560	920
			3 x 4			2-10d x 1½	4-10d x 1½	730	560	920
LMA6	LMA6	18	2 x 6	5½ FT	3½ FT	4-10d x 1½	2-10d x 1½	730	655	920
			3 x 6			4-10d x 1½	4-10d x 1½	875	655	1175
MA4	MA4	16	2 x 4	3½ FT	2½ FT	2-10d x 1½	2-10d x 1½	485	460	835
			3 x 4			2-10d x 1½	4-10d x 1½	730	460	920
MA6	MA6	16	2 x 6	5 FT	3½ FT	4-10d x 1½	2-10d x 1½	730	460	920
			3 x 6			4-10d x 1½	4-10d x 1½	730	460	1175

. . . the **ONLY APPROVED EQUAL™**

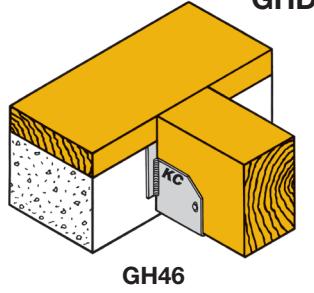
KC® STK NO	MATERIAL	DIMENSIONS (INCHES)				
		A	P	P	P	P
SFC6	11 ga	6	¾	1½	1¼	Specify
SFC8	11 ga	8	¾	1½	1¼	Specify
SFC10	11 ga	10	¾	1½	1¼	Specify
SFC12	11 ga	12	¾	1½	1¼	Specify
SFC14	11 ga	14	¾	1½	1¼	Specify
SFC16	11 ga	16	¾	1½	1¼	Specify

KC® STK NO	REF NO	MATERIAL	SIZE (INCHES)
WFT6	WT6	18 ga gal	6
WFT8	WT8	18 ga gal	8
WFT10	WT10	18 ga gal	10
WFT12	WT12	18 ga gal	12
W1	W1	14 ga gal	3.5



For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	GIRDER SIZE	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	DESIGN LOAD (LBS)
				2X PLATE H	3X PLATE H	S		
GH46	GH46	4 x 6	12 ga	4	3	6	4-16d	3170
GH46-8	GH46-8	4 x 6	12 ga	4	3	8	4-16d	3170
GH48	GH48	4 x 8	12 ga	6	5	6	4-16d	3170
GH48-8	GH48-8	4 x 8	12 ga	6	5	8	4-16d	3170
GH66	GH66	6 x 6	12 ga	4	3	6	4-16d	3170
GH66-8	GH66-8	6 x 6	12 ga	4	3	8	4-16d	3170
GH68	GH68	6 x 8	12 ga	6	5	6	4-16d	3170
GH68-8	GH68-8	6 x 8	12 ga	6	5	8	4-16d	3170



RETROFIT CONNECTORS

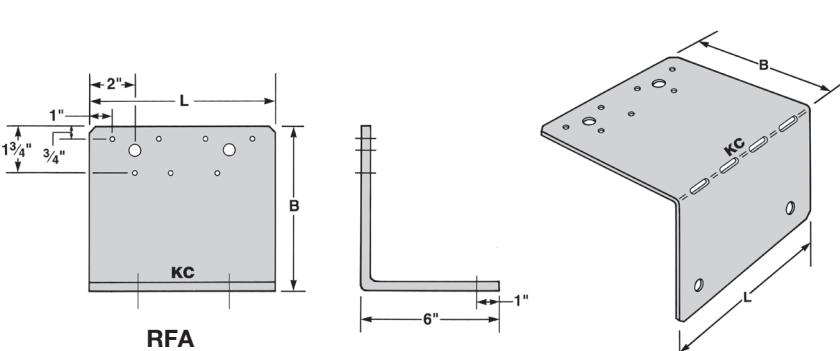
RFA

RETROFIT FOUNDATION ANGLES

Design Features . . eliminates vertical drilling into the mudsill for an anchor bolt that is to be used in a retrofit application. The **RFA** just needs to be nailed to the mudsill for retrofit needs or standards. The **RFA** must not be used more than 1 foot from the end of the mudsill, maximum spacing then is $2\frac{1}{2}$ feet on-center.

Material . . 12 ga. galvanized steel.

Special . . four sizes to fit 6 inch and 8 inch mudsills . . two regular sizes and two sizes for extra heavy-duty applications . . slotted bending holes are provided for conditions where the foundation does not line-up to the joists.



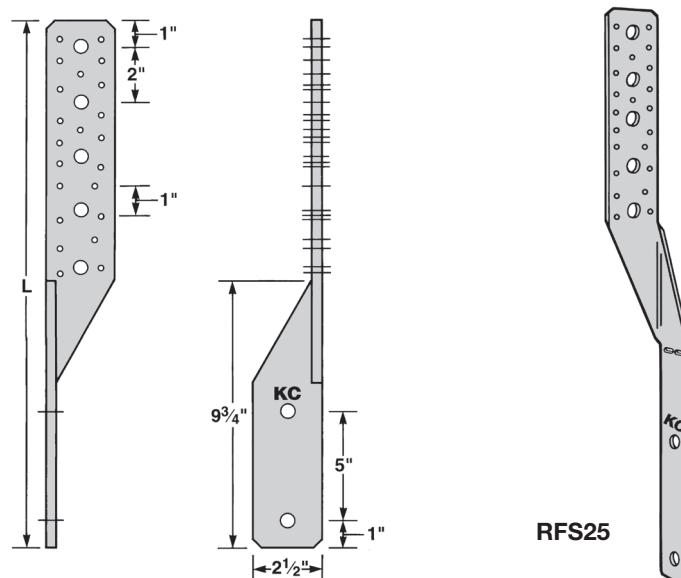
RFP

RETROFIT FOUNDATION PLATES/STRAPS

Design Features . . the **RFS** provides the builder with either nail or bolt holes for stud or floor joist connections. The $\frac{3}{16}$ " holes in the lower flange are for $\frac{1}{2}$ " retrofit bolts used to connect the **RFS** to concrete foundation walls. The **RFP** provides lateral load resistance by connecting the mudsill to the foundation.

Material . . 12 ga. and 7 ga. galvanized steel.

Special . . slotted bending holes are provided for conditions where the foundation does not line-up to the joists. The foundation straps are designed especially for true anchorage alignment to studs or floor joists by nailing; then bolting into concrete walls or foundations. A shim should be used if space between the plate and the sill is more than $\frac{3}{16}$ " but less than $1\frac{1}{2}$ ". If the space is greater, use the **RFA** series.



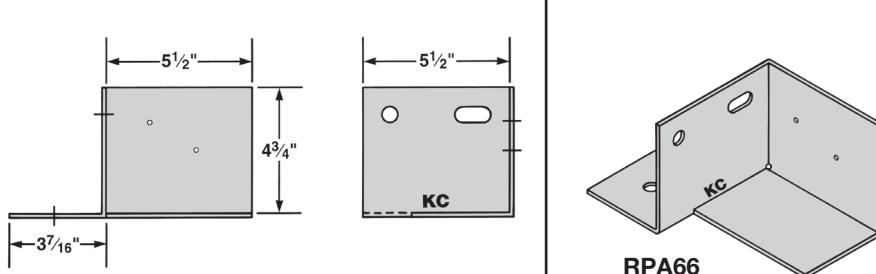
RPA

RETROFIT POST ANCHORS

Design Features . . allows exact column placement after the concrete has been set. The **RPA66** is used for either new or retrofit conditions with either surfaced or rough 6xs. The **RPA66** is installed in pairs.

Material . . 10 ga. galvanized steel.

Special . . two 16d nail holes are to be used for placement while drilling bolt holes. The **RPA66** should not be used for applications such as fences.



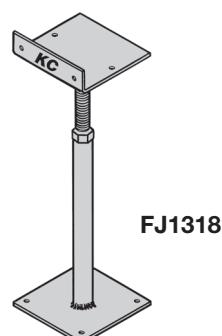
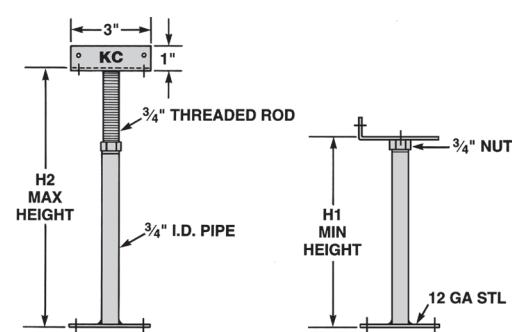
FJ

FLOOR JACKS

Design Features . . provide precise height and leveling for floor beams from 5" to 21" with infinitely adjustable settings within this range for a perfect fit. The standard design is welded 12 ga. steel.

Material . . Seat - 12 ga. steel, $\frac{3}{4}$ " threaded steel rod.

- Do not use **FJs** for dynamic jacking of structures, such as houses.



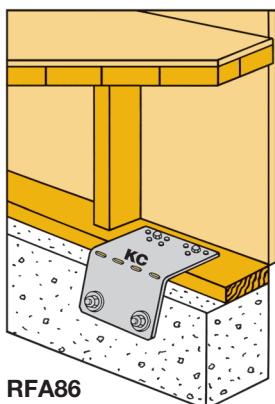
RETROFIT CONNECTORS

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RFA

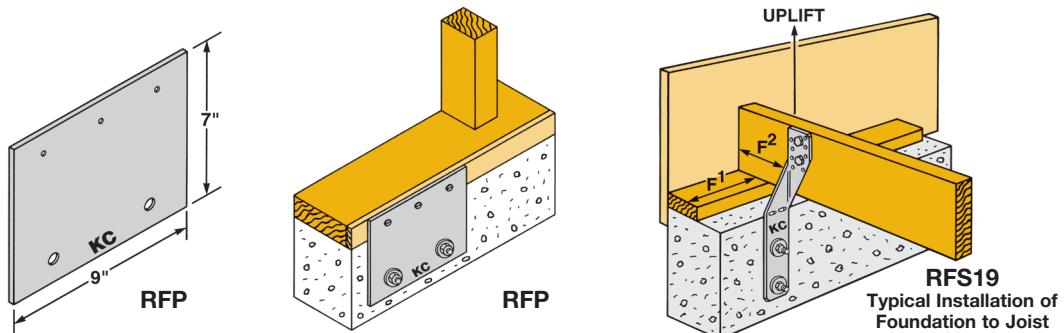
For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL & BOLT SCHEDULE		DESIGN LOAD (LBS)		
			L	B	ANCHOR BOLTS (INCH)	PLATE	PARALLEL TO PLATE	PERPENDICULAR TO PLATE	
							INTO PLATE	AWAY FROM PLATE	
RFA86	FA6	12 ga gal	8	5	2-1/2	7-10d x 1½	725	725	725
RFA88	FA8	12 ga gal	8	7	2-1/2	7-10d x 1½	725	725	725
RFA136	HFA6	12 ga gal	13	5	3-1/2	11-10d x 1½	1145	1145	1145
RFA138	HFA8	12 ga gal	13	7	3-1/2	11-10d x 1½	1145	1145	1145



For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

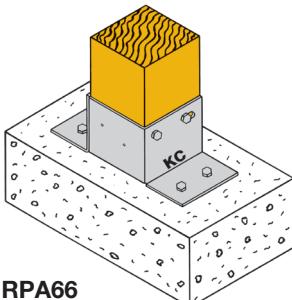
KC® STK NO	REF NO	MATERIAL	DIMENSIONS (LENGTH INCHES)		NAIL & BOLT SCHEDULE		DESIGN LOAD (LBS)		
			ANCHOR BOLT (INCH)	STUD JOIST	NAILS (UPLIFT)	BOLT (UPLIFT)	F ¹	F ²	
RFP	FAP	7 ga gal	9	—	3-1/4 x 2½ lag	—	—	960	385
RFS19	FJA	12 ga gal	19½	2-1/2	8-10d x 1½	1110	760	—	—
RFS25	FSA	12 ga gal	25½	2-1/2	8-10d x 1½	1110	1110	—	—



RFP
RFS

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

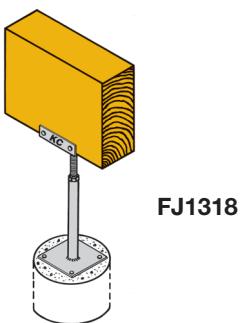
KC® STK NO	REF NO	BOLT SCHEDULE		DESIGN LOAD (LBS)
		ANCHOR	POST	
RPA66	CBA66	4-3/4	2-5/8 MB	3000



RPA

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	DIMENSIONS (INCHES)		NAIL SCHEDULE		DESIGN LOAD (LBS)
		H1	H2	BASE	ANGLE	
FJ57	J57	5	7	4-16d	4-16d	3670
FJ813	J813	8	13	4-16d	4-16d	3670
FJ1116	J1116	11	16	4-16d	4-16d	3670
FJ1318	J1318	13	18	4-16d	4-16d	3670
FJ1621	J1621	16	21	4-16d	4-16d	3670
FJ2126	J2126	21	26	4-16d	4-16d	3670



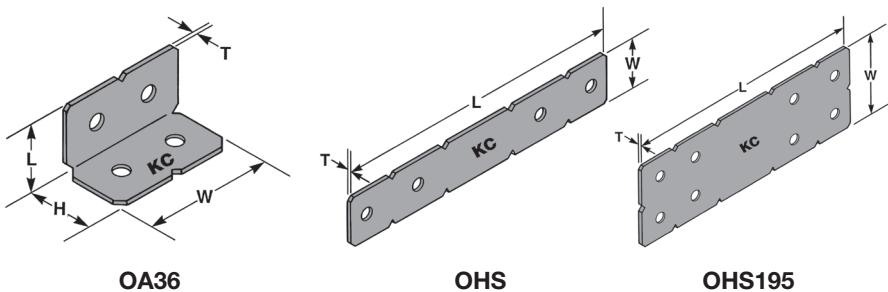
FJ

ORNAMENTAL CONNECTORS

**OA
OS
OHS**

ANGLES/STRAPS

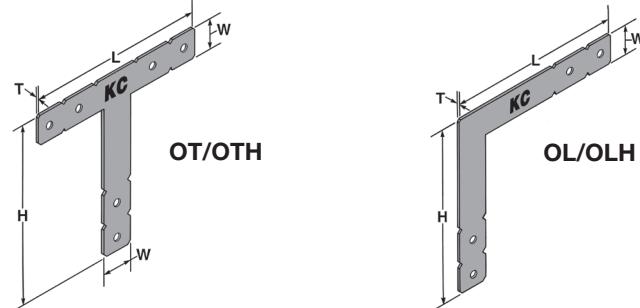
Design Features . . rustic notched ornamental hardware appearance that is highly functional. Provide fast and accurate bolting of two intersecting wood members (reinforcing the intersection joints). Erection nail holes are provided for easy installation.
Material . . 12 ga. and 7 ga. prime quality steel.
Finish . . KC® SUPERSPEED® black paint.



**OL
OLH
OT
OTH**

"L"/"T" BRACES

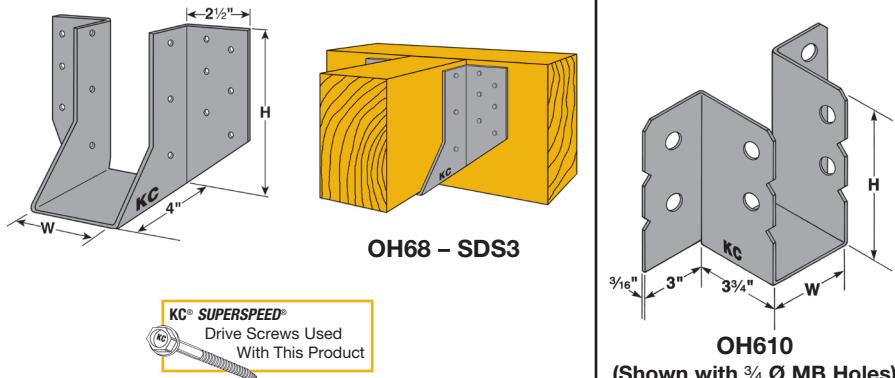
Design Features . . rustic notched ornamental appearance that is highly functional. These inexpensive braces are ideal for gates, patio covers, joining posts and columns to headers and beams and other applications where added reinforcement is needed. Braces may be bolted for heavy-duty applications. Erection nail holes are provided for easy installation.
Material . . 12 ga. and 7 ga. prime quality steel.
Finish . . KC® SUPERSPEED® black paint.



OH

HANGERS

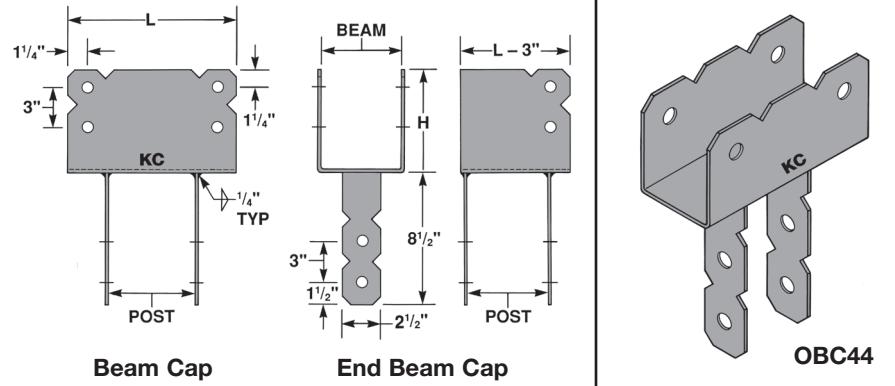
Design Features . . rustic ornamental appearance that is highly functional. The hangers provide extra margin of safety. The basic design style is for heavy-duty hanger applications where KC® SUPERSPEED® Drive Screws are recommended. Erection nail holes are provided for safety and easy installation.
• Joist Sizes . . 2xs, 3xs, 4xs, 6xs, 8xs, double 2xs, 3 1/8" and 5 1/8" glu-lam . . also available on special order for rough beam sizes.
Material . . 12 ga. prime quality steel.
Special . . Ornamental hangers can be manufactured using 3/16" steel and 3/8" Ø machine bolts with notched ornamental appearance.
Finish . . KC® SUPERSPEED® black paint.



**OBC
OEBC**

BEAM CAPS

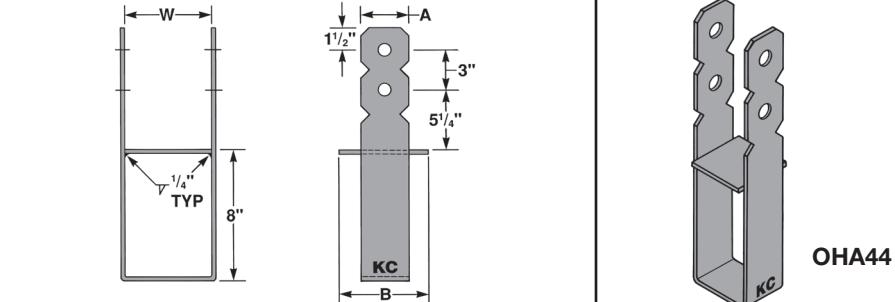
Design Features . . rustic notched ornamental appearance that is highly functional. Four configurations provide complete flexibility – please specify.
(1) **OBC** – Standard ornamental beam caps.
(2) **OEBC** – Ornamental end beam caps.
(3) **OBCO** – Ornamental beam caps for welding to pipe or other column.
(4) **OBCOB** – Ornamental cross beam connectors, the result of back-to-back welding to two beam caps.
Material . . 1/4" prime quality steel.
Finish . . KC® SUPERSPEED® black paint.
Ordering Information . . Example: OBC46, beam is the first number 4 (3 1/8"); post is the second number, 6 (5 1/2").



OHA

HEAVY ANCHORS

Design Features . . rustic notched ornamental appearance that is highly functional. Accommodates heavy column bases, rough-sawn posts, glu-lam timbers or heavy-duty fence construction where high structural values and durable performance are part of the specifications. Anchors shall be set in position before pouring concrete. Erection nail holes are provided to speed up installation.
Material . . 1/4" prime quality steel.
Finish . . KC® SUPERSPEED® black paint.

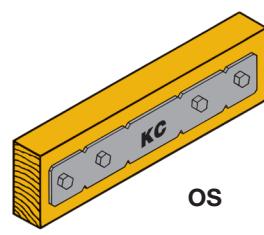
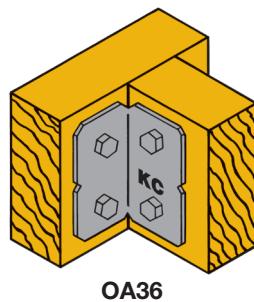


ORNAMENTAL CONNECTORS

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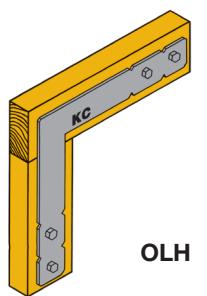
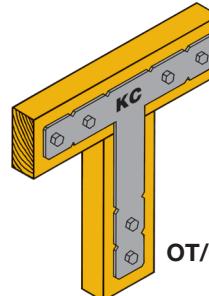
KC® STK NO	REF NO	MATERIAL (T)	DIMENSIONS (INCHES)			BOLT SCHEDULE	DESIGN LOAD (LBS)
			W	H	L		
OA33	OHA33	7 ga	3	3 1/4	3 1/4	2-3/4 MB	1840
OA36	OHA36	7 ga	6	3 1/4	3 1/4	4-3/4 MB	3675
OS	OS	12 ga	2	—	12	4-1/2 MB	1590
OHS	OHS	7 ga	2 1/2	—	12	4-5/8 MB	1720
OHS135	OHS135	7 ga	6	—	13	4-3/4 MB	4550
OHS195	OHS195	7 ga	6	—	19 1/4	8-3/4 MB	9100



OA
OS
OHS

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

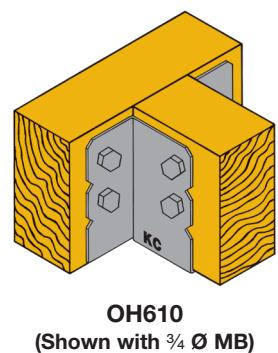
KC® STK NO	REF NO	MATERIAL (T)	DIMENSIONS (INCHES)			BOLT SCHEDULE
			W	H	L	
OL	OL	12 ga	2	12	12	4-1/2 MB
OLH	OHL	7 ga	2 1/2	12	12	4-5/8 MB
OT	OT	12 ga	2	12	12	6-1/2 MB
OTH	OHT	7 ga	2 1/2	12	12	6-5/8 MB



OL
OLH
OT
OTH

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	JOIST SIZE	DIMENSIONS (INCHES)		KC® SUPERSPEED® DRIVE SCREWS 1/4 x 3		DESIGN LOAD (LBS)			
			W	H	HEADER	JOIST	UPLIFT (133%)	FLOOR (100%)	SNOW (115%)	ROOF (125%)
OH46-SDS3	OHU46-SDS3	4 X 6	3 1/16	5	6	4	1640	1850	2130	2315
OH48-SDS3	OHU48-SDS3	4 X 8	3 1/16	6 1/4	8	6	2465	2470	2840	3085
OH410-SDS3	OHU410-SDS3	4 X 10	3 1/16	8 1/4	12	6	2465	3705	4260	4630
OH412-SDS3	OHU412-SDS3	4 X 12	3 1/16	10 1/4	12	8	3285	3705	4260	4630
OH414-SDS3	OHU414-SDS3	4 X 14	3 1/16	12 1/4	14	10	4105	4320	4970	5400
OH66-SDS3	OHU66-SDS3	6 X 6	5 1/2	5	6	4	1640	1850	2130	2315
OH68-SDS3	OHU68-SDS3	6 X 8	5 1/2	7	12	6	2465	3705	4260	4630
OH610-SDS3	OHU610-SDS3	6 X 10	5 1/2	9	14	6	2465	4320	4970	5400
OH612-SDS3	OHU612-SDS3	6 X 12	5 1/2	11	16	8	3285	4940	5680	6175
OH614-SDS3	OHU614-SDS3	6 X 14	5 1/2	13	18	10	4105	5555	6390	6945

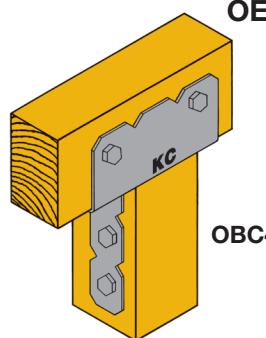


OH610
(Shown with 3/4 Ø MB)

OH

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	BEAM WIDTH	POST SIZE (INCHES)	MATERIALS (INCHES)	DIMENSIONS (INCHES)		BOLT SCHEDULE		DESIGN LOAD	
					H	L	BEAM BOLTS	POSTS BOLTS (INCHES)	UPLIFT LBS	DOWN (LBS)
OBC44	OCC44	3 9/16	3 9/16	1/4 STL	4 1/2	9	2-3/4 x 5 MB	2-3/4 x 5 MB	3360	12250
OBC46	OCC46	3 9/16	5 1/2	1/4 STL	7 1/2	9	4-3/4 x 5 MB	2-3/4 x 7 MB	6720	19250
OBC66	OCC66	5 1/2	5 1/2	1/4 STL	7 1/2	12	4-3/4 x 7 MB	2-3/4 x 7 MB	9440	30250
OBC68	OCC68	5 1/2	7 1/2	1/4 STL	7 1/2	12	4-3/4 x 7 MB	2-3/4 x 9 MB	9440	37540
OBC88	OCC88	7 1/2	7 1/2	1/4 STL	7 1/2	12	4-3/4 x 9 MB	2-3/4 x 9 MB	9440	37540

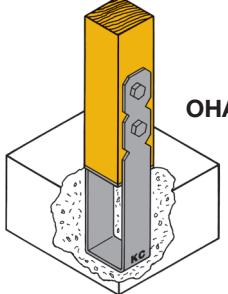


OBC
OEBC

OBC44

For Product Substitutions . . . the **ONLY APPROVED EQUAL™**

KC® STK NO	REF NO	POST SIZE	MATERIALS (INCHES)	DIMENSIONS (INCHES)			BOLT SCHEDULE	DESIGN LOAD UPLIFT (LBS)
				A	B	W		
OHA44	OCB44	4 x 4	1/4 STL	3	3 9/16	3 9/16	2-3/4 x 5 MB	5030
OHA46	OCB46	4 x 6	1/4 STL	3	5 1/2	3 9/16	2-3/4 x 5 MB	5030
OHA48	OCB48	4 x 8	1/4 STL	3	7 1/2	3 9/16	2-3/4 x 5 MB	5030
OHA66	OCB66	6 x 6	1/4 STL	3	5 1/2	5 1/2	2-3/4 x 7 MB	5030
OHA68	OCB68	6 x 8	1/4 STL	3	7 1/2	5 1/2	2-3/4 x 7 MB	5030
OHA88	OCB88	8 x 8	1/4 STL	3	7 1/2	7 1/2	2-3/4 x 9 MB	7230
OHA810	OCB810	8 x 10	1/4 STL	3	9 1/2	7 1/2	2-3/4 x 11 MB	7230



OHA

OHA44

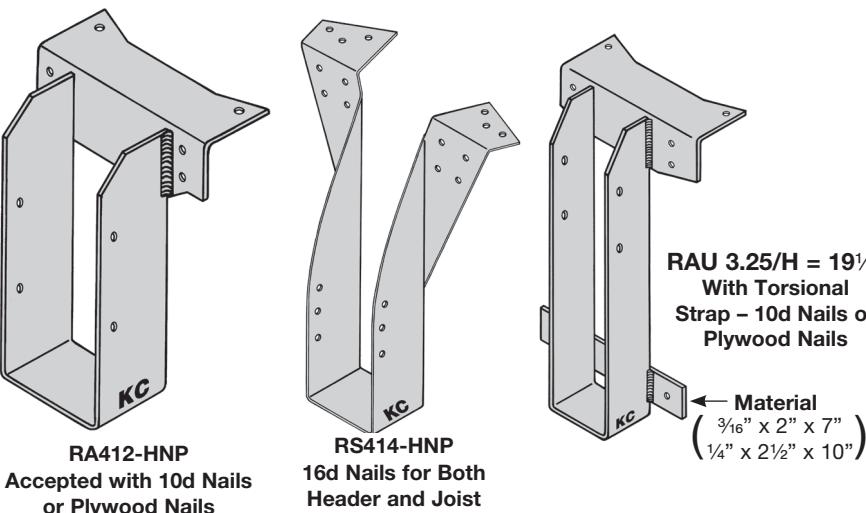
SPECIAL AND CUSTOM JOIST HANGERS

HNP HAYWARD NAIL PATTERN OR UPLIFT HANGERS

Design Features . . both the **R** or the **RS** series can be modified for the **HNP** uplift . . provides header or face nailing with additional purlin nailing. Recommended for areas that require additional nailing for higher uplift loads. A torsional rotation strap may also be supplied to modify the **R** or the **RS** series hangers and is recommended to counter rotation problems for hangers 18" and deeper. The strap also acts as a stiffener to eliminate buckling in the "U" strap. **HNP** modifications have been tested by independent laboratory tests conducted in accordance with code criteria, with a minimum safety factor of three.

Loads . . for the **RS4HNP**, see pages 20 and 21; for the **RA4HNP**, see pages 22 and 23.

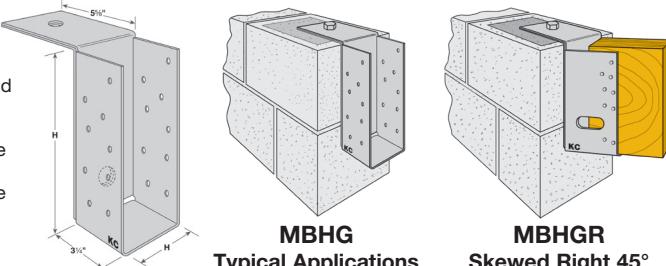
Ordering Information . . to order hangers other than **HNP**, start with stock no. **RH** 3.25/19½, add "U" after standard stock description **RHU** 3.25/19½ for uplift call out.



MBHG MASONRY BEAM HANGERS GALVANIZED

Design Features . . the **MBHG** is a single piece, non-welded connector available for solid sawn, truss and engineered wood products. The only skew for the **MBHG** is a standard 45° either right or left. The maximum allowable download is 3505 lbs and 1585 lbs uplift for height 7.25. For all other models, use the table listed download and uplift.

Material . . 10 ga. galvanized steel.



KC® MODEL NO	DIMENSIONS
W	D
MBHG3.12/9.25	$3\frac{1}{8}$ $9\frac{1}{4}$
MBHG3.12/11.25	$3\frac{1}{8}$ $11\frac{1}{4}$
MBHG3.56/7.25	$3\frac{3}{16}$ $7\frac{1}{4}$
MBHG3.56/9.25	$3\frac{3}{16}$ $9\frac{1}{4}$
MBHG3.56/11.25	$3\frac{3}{16}$ $11\frac{1}{4}$
MBHG3.56/11.88	$3\frac{3}{16}$ $11\frac{1}{8}$
MBHG3.56/14	$3\frac{3}{16}$ 14
MBHG3.56/16	$3\frac{3}{16}$ 16
MBHG3.56/18	$3\frac{3}{16}$ 18
MBHG5.50/7.25	$5\frac{1}{2}$ $7\frac{1}{4}$
MBHG5.50/9.25	$5\frac{1}{2}$ $9\frac{1}{4}$
MBHG5.50/11.25	$5\frac{1}{2}$ $11\frac{1}{4}$
MBHG5.50/11.88	$5\frac{1}{2}$ $11\frac{1}{8}$
MBHG5.50/14	$5\frac{1}{2}$ 14
MBHG5.50/16	$5\frac{1}{2}$ 16
MBHG5.50/18	$5\frac{1}{2}$ 18

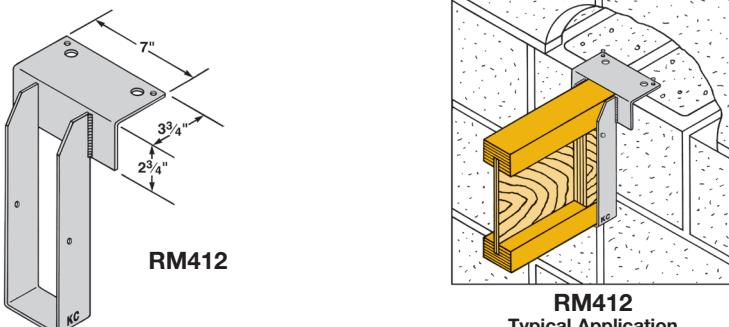
RM MASONRY HANGERS

Design Features . . duplex nails installed in the top flange act as anchorage into an 8" concrete block or concrete wall construction.

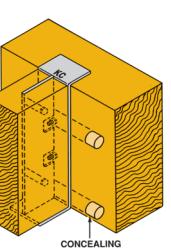
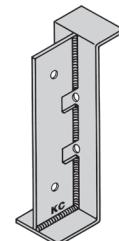
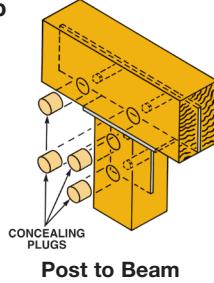
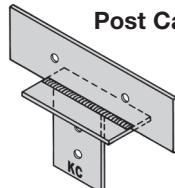
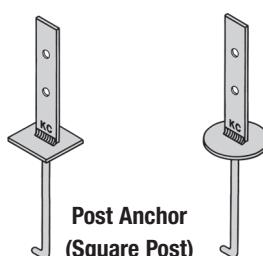
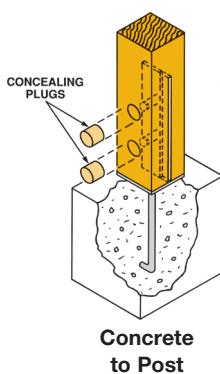
Loads . . generally the same as for the **R** or **RA** hangers (pages 22 and 23).

LOAD DIRECTION	VARIATION	% OF DESIGN LOAD
Down	SKEWED	100
Down	SLOPED	100
Down	COMBINATION	100
Down	OFFSET	50

Finish . . KC® SUPERSPEED® gray paint.



CONCEALED HARDWARE



For Added Corrosion Resistance
KC Metals Products, Inc. will hot-dip galvanize your order for those jobs which call out for that extra protection. In addition, all items are available in stainless steel material.

MISC.: CLIPS, BRACKETS AND ANGLES

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FP

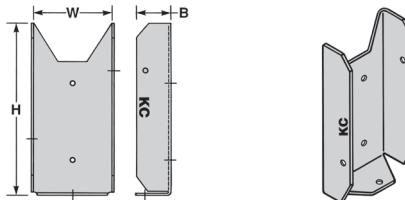
FENCE BRACKETS

Design Features . . provide a secure fit for the connection of 2 x 4 fence boards to post . . easier to plan and build . . holes are sized to #6 wood screws or 8d nails.

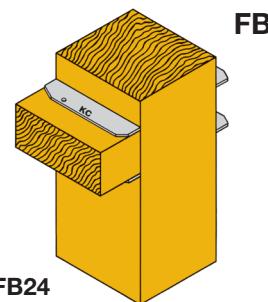
Material . . 20 ga. galvanized steel.

For Product Substitutions . . the ONLY APPROVED EQUAL™

KC® STOCK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)			NAIL SCHEDULE	
			B	W	H	JOIST	HEADER
FB24	FB24	20 ga gal	¾	1½	3½	3-8d x 1½	2-8d



FB24



FB24

CFA

CONCRETE FORM ANGLES/ SHELF BRACKETS

Design Features . . your shelf storage can be limited only by size — not weight . . recommended for your heaviest shelf requirements. These are used for window ledge brackets, counter supports and anywhere the shelf bracket must do a complete job.

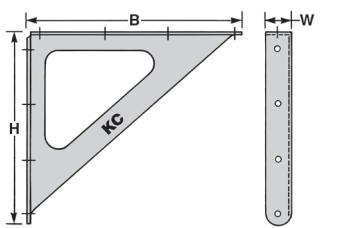
Material . . 18 ga. and 16 ga. galvanized steel.

Special . . the CFA angle is used for tilt-up perimeter forming. The nail hole placement allows gun nailing while the 18 ga. embossment insures substantial re-use life. The larger SBB can be used for garage shelving where heavier loads are required. The SBB can also be used as supports for kitchen to outside area pass-through counters.

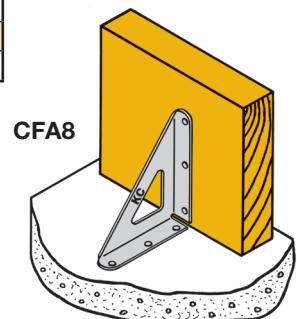
Installation . . full strength will result from correct attachment to stud, header, or other solid surface with #12 wood screws, 1/4" lag bolts or N20 annular ring shank nails.

For Product Substitutions . . the ONLY APPROVED EQUAL™

KC® STOCK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)			NO. 12 SCREW OR N20	
			B	W	H	STUD	HEADER
CFA8	CFA	18 ga gal	5½	7/8	6½	3	3
SBS8	CF	18 ga gal	6½	7/8	5½	3	3
SBB	SBV	16 ga gal	11	1	9	4	4



SBB



CFA8

SP

SAFETY PLATES

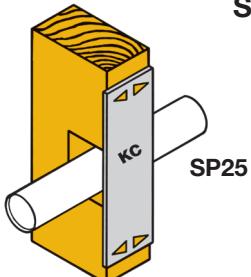
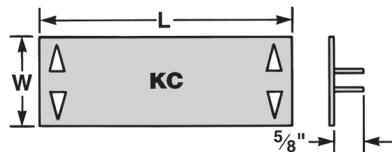
Design Features . . handy, nailless plate protects electrical and water lines that penetrate framing members . . prevent accidental nailing into pipes and wiring.

Material . . 20 ga. and 16 ga. galvanized steel.

Special . . prongs eliminate the need for nailing. The SP25-16 is 16 ga. galvanized steel to conform to the National Electrical Code.

For Product Substitutions . . the ONLY APPROVED EQUAL™

KC® STOCK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)	
			W	L
SP25	—	20 ga gal	1¾	5
SP2516	NS2	16 ga gal	1¾	5



SP25

PCS

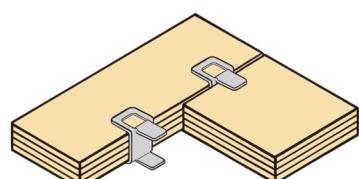
ALUMINUM/STEEL PLYWOOD CLIPS

Design Features . . steel clips for quick, easy installation between plywood panels for roof sheathing or panelized construction . . provide structural support . . reduce normal plywood deflection between panels . . embossment allows necessary spacing.

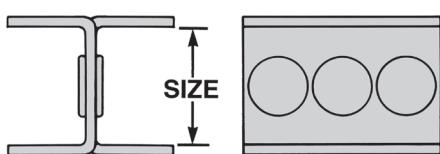
Material . . 20 ga. galvanized steel.

For Product Substitutions . . the ONLY APPROVED EQUAL™

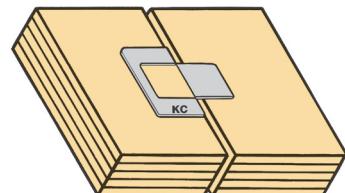
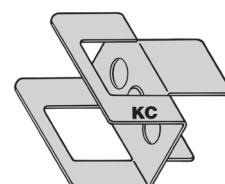
KC® STOCK NO	REF NO	SIZE (INCHES)
PCS ½	PSCL ½	½
PCS 7/16	PSCL 7/16	7/16
PCS 1/2	PSCL 1/2	1/2
PCS 5/8	PSCL 5/8	5/8
PCS ¾	PSCL ¾	¾



(Steel Plywood Clip)



PCS50



KC®

METALS PRODUCTS, INC.
SUPERSPEED® CONNECTORS

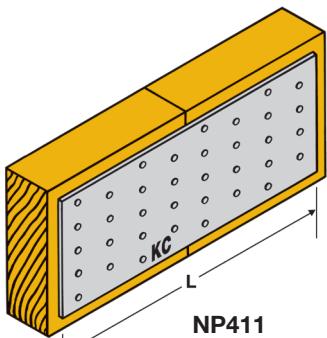
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101

NP**NAIL PLATES**

Design Features . . designed to provide positive connections at wall intersections and ridge ties when the top plates are cut . . also used for truss repairs or construction and splice applications on wood-to-wood splices. **NPA** nail plates are flanged to provide added support value.

Material . . 20 ga. galvanized steel.

**For Product Substitutions . . the ONLY APPROVED EQUAL™**

KC® STOCK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE
			W	L	
NP15	TP15	20 ga gal	1 ¹³ / ₁₆	5	13-8d
NPA37	TPA37	20 ga gal	3 ¹ / ₂	7	28-8d
NPA39	TPA39	20 ga gal	3 ¹ / ₂	9	36-8d
NP35	TP35	20 ga gal	3 ¹ / ₈	5	23-8d
NP37	TP37	20 ga gal	3 ¹ / ₈	7	32-8d
NP39	TP39	20 ga gal	3 ¹ / ₈	9	41-8d
NP311	TP311	20 ga gal	3 ¹ / ₈	11	50-8d
NP45	TP45	20 ga gal	4 ⁷ / ₆₄	5	30-8d
NP47	TP47	20 ga gal	4 ⁷ / ₆₄	7	42-8d
NP49	TP49	20 ga gal	4 ⁷ / ₆₄	9	54-8d
NP411	TP411	20 ga gal	4 ⁷ / ₆₄	11	66-8d
NP57	TP57	20 ga gal	5 ³ / ₄	7	60-8d
NPA57	TPA57	20 ga gal	5	7	40-8d

RPS**RETROFIT/REINFORCED PLATE STRAPS**

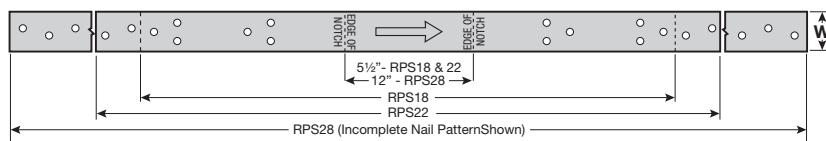
Design Features . . the **RPS** Retrofit/Reinforced plate straps are installed over framing members which water pipes and electrical wiring must pass through. The **RPS** straps help prevent nails from piercing the water pipes and electrical wiring. The straps can be used on single or double 2X members..

Material . . 16 ga. galvanized steel.

Special . . These straps meet the code requirement of IBC, IRC, UBC, and the City of Los Angeles.

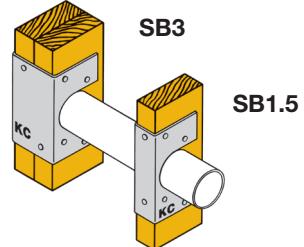
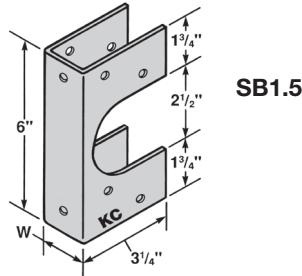
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KC® STOCK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)		NAIL SCHEDULE	NOTCH WIDTH	DESIGN LOAD (LBS) (133%)
			W	L			
RPS18	RPS18	16 ga gal	1 ¹ / ₂	18 ⁵ / ₁₆	12-16d	≤ 5 ¹ / ₂ "	1160
RPS22	RPS22	16 ga gal	1 ¹ / ₂	22 ⁵ / ₁₆	12-16d	≤ 5 ¹ / ₂ "	1160
			1 ¹ / ₂	22 ⁵ / ₁₆	16-16d	≤ 5 ¹ / ₂ "	1565
RPS28	RPS28	16 ga gal	1 ¹ / ₂	28 ⁵ / ₁₆	12-16d	≤ 12"	1160
			1 ¹ / ₂	28 ⁵ / ₁₆	16-16d	≤ 12"	1565

**SB****STUD BRACES**

Design Features . . reinforce rafters, studs and joists that have been drilled or notched during construction for pipes, especially where a large portion of member has been removed. Stud brace (**SB**) can be used for repairing bottom and top plates without interfering with the studs.

Material . . 18 ga. galvanized steel.

**For Product Substitutions . . the ONLY APPROVED EQUAL™**

KC® STOCK NO	REF NO	MATERIAL	DIMENSIONS (INCHES)	NAIL SCHEDULE	APPLICATION	DESIGN LOAD (LBS)	
						WIDTH	HEADER
SB1.5	SS1.5	18 ga gal	1 ¹ / ₁₆	12-10d x 1 ¹ / ₂	Single	570	570
SB2.5	SS2.5	18 ga gal	2 ⁹ / ₁₆	12-10d x 1 ¹ / ₂	Single	570	570
SB3	SS3	18 ga gal	3 ¹ / ₈	12-10d	Double	790	790
SB4.5	SS4.5	18 ga gal	4 ¹ / ₂	14-10d	Triple	790	790

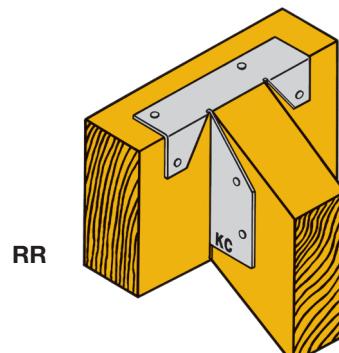
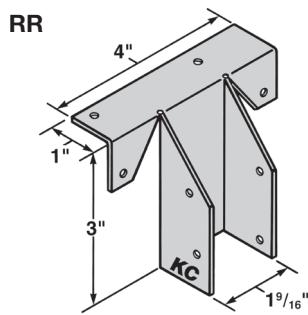
RR**RAFTER RIDGE CONNECTORS**

Design Features . . universal all-purpose connector for tying rafters to ridge beams or ledges.

• **Joist Sizes** . . 2 x 4 to 2 x 6.

Material . . 18 ga. galvanized steel.

Special . . the top flange can be flattened out and the **RR** can be used to provide a rafter-to-face connector. The connectors can be used with any rafter slope and any rafter width (2" normal width).

**For Product Substitutions . . the ONLY APPROVED EQUAL™**

KC® STOCK NO	REF NO	JOIST SIZE	MATERIAL	NAIL SCHEDULE		DESIGN LOAD (LBS)		UPLIFT LBS
				HEADER	JOIST	NORMAL	MAX	
RR	RR	2 x 4	18 ga gal	4-10d	4-10d x 1 ¹ / ₂	375	370	465



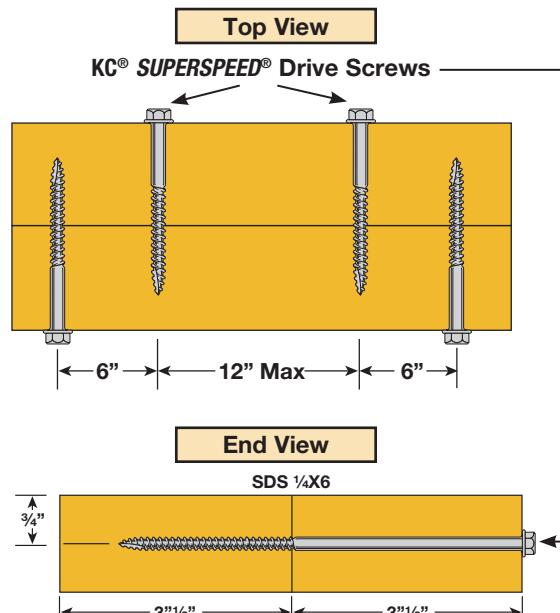
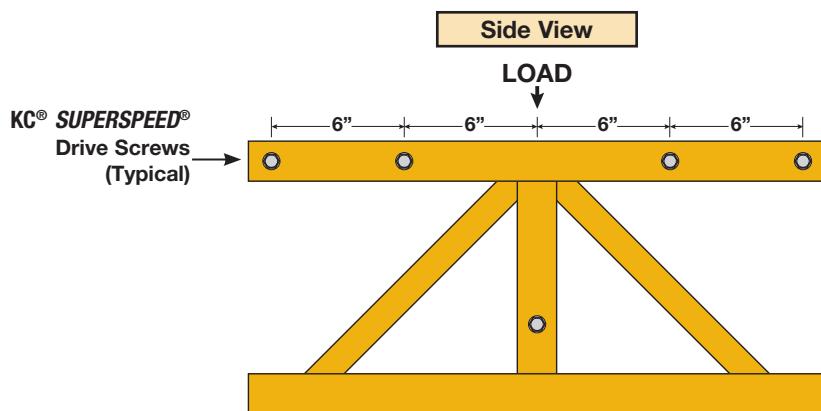
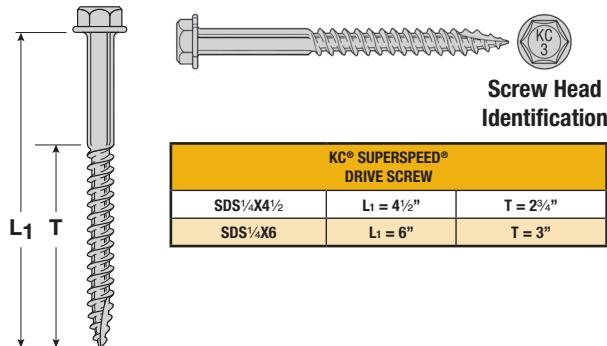
SUPERSPEED® DRIVE SCREW INSTALLATION FOR MULTI-PLY TRUSSES

www.kcmetals.com

2-Ply Floor Trusses:

- (1) Do not overdrive screw heads.
- (2) If splitting occurs, pre-drill screw holes .75 screw diameter maximum per 2001 NDS 11.1.5.3.
- (3) Floor sheathing must be installed fastened to both Truss top cords.
- (4) SDS^{1/4}X6 KC[®] SUPERSPEED[®] drive screws may be installed through Truss plates with pre-drilling when approved by Truss designer.
- (5) Design of Truss with required load is the responsibility of Truss designer/manufacturer.

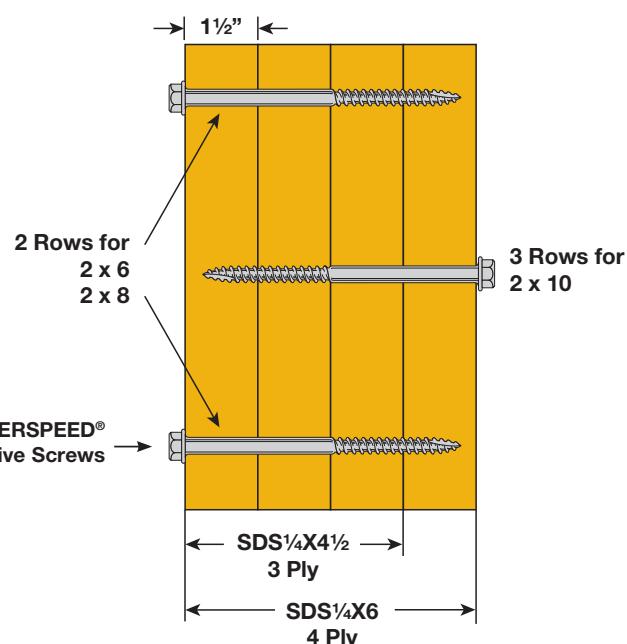
DESIGN LOAD	
KC [®] SUPERSPEED [®] SDS ^{1/4} " DRIVE SCREWS	100% ALLOWABLE SHEAR (LBS)
SDS ^{1/4} X6	DFL/SP SPF 245 200



Multi-Ply Trusses:

- (1) Screw spacing along length of truss 24" maximum.
- (2) Provide adequate lateral bracing against tension due to side framing.
- (3) if splitting occurs, pre-drill screw holes .75 times screw diameter maximum per 2001 NDS 11.1.5.3.
- (4) Verify with Local Building Official that screw connection of multi-ply trusses is acceptable.
- (5) Verify with Truss Designer before installing screws through metal Truss plates, pre-drilling is required.

DESIGN LOAD	
KC [®] SUPERSPEED [®] SDS ^{1/4} " DRIVE SCREWS	100% ALLOWABLE SHEAR (LBS)
SDS ^{1/4} X4½	DFL/SP SPF 265 225



METALS PRODUCTS, INC.
SUPERSPEED[®] CONNECTORS

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103

TESTING

Many factors are evaluated before an allowable load is derived for a structural connector. One important factor is the testing. This testing will then be compared with the calculations per the governing code to determine the capacity of the connector when properly installed. The information being presented here is to provide the user and or specifier of structural hardware with the facts regarding testing done by **KC® Metal Products, Inc.** on its structural wood connectors. Those interested should obtain and review a copy of **AC13, ACCEPTANCE CRITERIA FOR JOIST HANGERS AND SIMILAR DEVICES**, published by ICC and available on their web site.

There are a number of critical factors to look for when reviewing a test for legitimacy;

- 1) Typically a test assembly will have **2** wood connectors assembled with the relevant wood members in a symmetrical pattern (see **Figure 1**). This arrangement will require that the load applied by the test machine be divided by **2** to achieve an allowable load for each connector.
- 2) The **1/8** inch gap between the ends of the member simulating the joist and the sides of the member simulating the header is critical. This gap is important to minimize any friction between joist/hanger and header which would give an unrealistic value to the typical connection. The **1/8** inch gap must be maintained throughout the test duration because as **one side** of the assembly deflects the **opposite side** will contact the header at the bottom giving an **unrealistic** value. **KC® Metal Products, Inc.** will typically use a piece of **1/8** inch **Teflon** between the end of the joist/hanger and the header to both maintain the **1/8** inch gap as well as reduce the friction.
- 3) Both **ASTM-D1761** and **AC13** specify that the load bearing block used on top of the joist simulator be **1/2** the span of the joist. This block length will insure that the effects of bending in the solid sawn joist member will be reflected on the connectors tested capacity.
- 4) A critical element to a proper test is the **preload**. **Preloads** are applied to the test assembly to seat the wood and connectors in a realistic manner to simulate actual installed conditions. Current criteria requires that the preload be between **5** and **20** percent of the ultimate load. The **preload** should always be indicated on any properly conducted test. Once the **preload** has been applied the load is removed and the dial indicators are **reset** before loading begins. **Excessive preload** will yield **unrealistic values** for the connector because they will **pre-deflect** the connectors to a point above any **actual field installation**.
- 5) One of the criteria used to evaluate a connectors capacity, based on testing, is the amount of load required to deflect the joist simulator **1/8** inch in relation to the header simulator. This measurement is usually accomplished with the

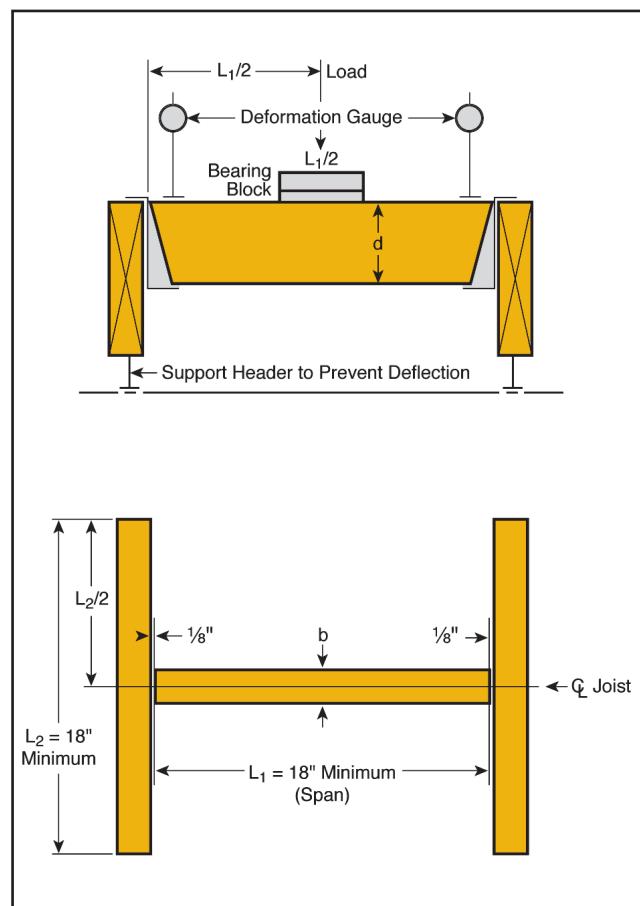
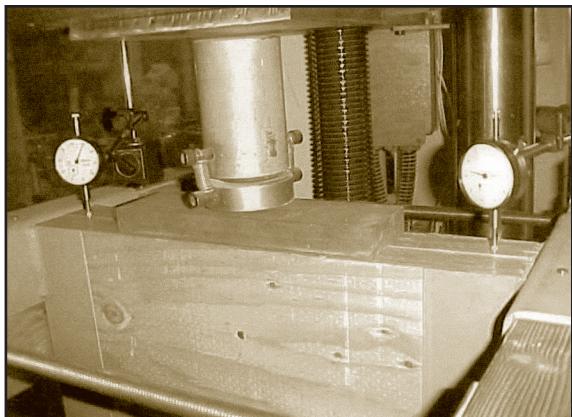
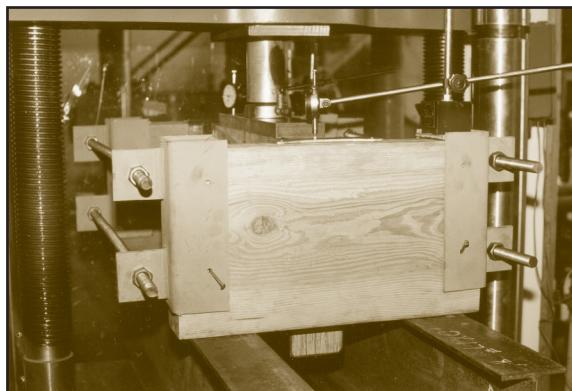


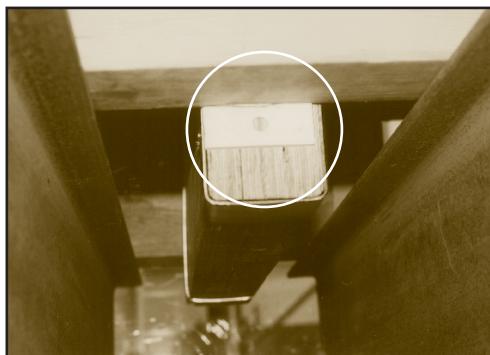
Figure 1

TESTING

Typical Test Set-Up



Typical Test Set-Up

Test Set-Up
Note 1/8" Teflon Spacer

use of dial indicators accurate to .001 inch placed at each end of the joist simulator. The dial indicators are generally located on the **top of the joist** to prevent damage in the event of an early failure of the assembly. A number of readings are taken at set intervals to establish a load versus deflection curve. The interval that the readings are taken is usually based on an estimation of the connectors allowable load capacity with **10** readings yielding a reasonable deflection curve. After the **1/8** inch deflection has been established based on the dial indicator readings the indicators are removed and loading continues until the ultimate capacity of the assembly is reached.

- 6) Once the ultimate capacity of the test assembly has been determined the load will be divided by **2** because there are two connectors per assembly. This load is now the ultimate tested load for each connector. It is a requirement per **AC13** that when **3** tests have been run that no individual test can vary by more than 20% from the average of all **3** tests otherwise **3 additional tests are required**. The lowest, **NOT** the average, ultimate load per connector must be divided by a safety factor of **3** to determine the connectors allowable capacity based on testing.
- 7) Another very important part of a correctly conducted test is the **failure mode**, what was the significant element of the test assembly that contributed to the ultimate load. In the very large number of tests conducted using **KC®** manufactured product the failure mode can be anything from wood crushing and or splitting, to actual connector failure, or as is very often the case the fasteners, **nails, bolts, screws**, used to connect the hanger to the wood will break or pull out. As can be seen from this it is very important that the fasteners specified, both size and quantity be used for the connector to perform in a manner consistent with the allowable loads published. It is also very important that **all of the correct fasteners be installed before the connection is subjected to any load**.

As is evident from the preceding discussion and review of the figures the mere presence of a test does not mean that the test has been done correctly or that it necessarily reflects actual field use of a connector. Tests performed on products manufactured by **KC® Metal Products, Inc.** are done by an independent laboratory, accredited by **ICC** evaluation service. **KC® Metal Products, Inc. does no testing at our own facility for the determination of published allowable loads.**

CALIFORNIA ANCHOR DOWN SYSTEM

ADSTG
ADG
CADS

SCREW TYPE ANCHOR DOWNS

Design Features . . heavy gage load transfer plate reduces anchor down deflection . . improved connection using screws instead of bolts . . special screws have been tested and are included with **ADSTG** . . galvanized steel for corrosion resistance . . designed to easily fit on a 4x post . . flat base makes for easier installation . . ideal for retrofit applications. Heavy loaded anchor downs **ADG**, Anchor Down Screw Types, are tension products used to connect framing members to either concrete, using a suitable anchor bolt, or span between other framing members using threaded rods. For raised installation **ADG** anchor downs require a nut on both side of load transfer plate.

The new **ADG** heavy duty anchor down combining high load capacity and minimizes deflection under load. With the use of a unique load transfer plate which is formed and pressed into the body of the anchor down creating a one piece structural unit.

ADG 8-SDS3	8KIPS
ADG12-SDS3	10KIPS
ADG15-SDS3	15KIPS

Material . . 12 ga. galvanized steel . . **ADSTG**

7 ga. galvanized steel . . **ADG**

¾" x 2½" x 2½" sq. washer hot dipped galvanized . . **ADG15**

Finish . . Galvanized steel

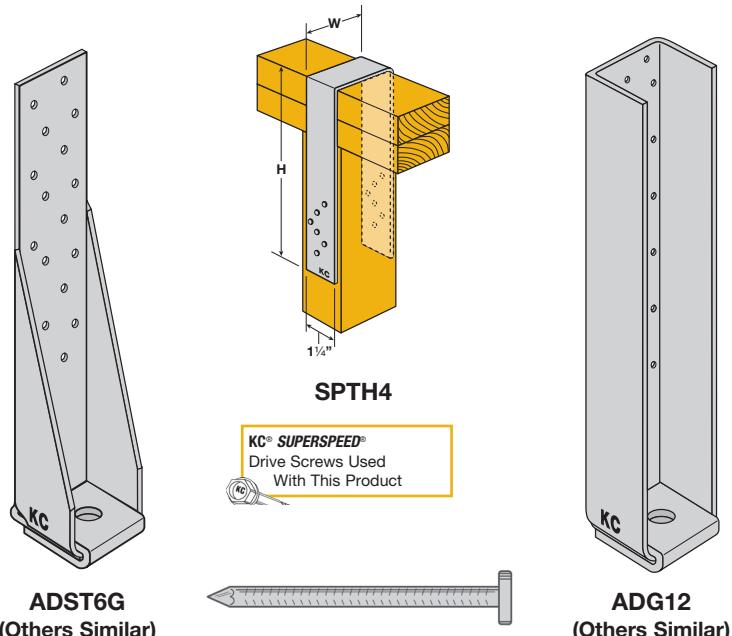
Special . . **KC® SUPERSPEED®** Drive Screws are best installed with a low speed, or variable speed. ½" drill and a ¾" hex head driver.

Loads . . design loads are based on capacity of special screws (**KC® SUPERSPEED®** Drive Screws) ¼" x 3 inch of 500 pounds each @ 133% duration. Nails or lag screws cannot be substituted and achieve the listed design loads.

Special . . **KC® SUPERSPEED®** Drive Screws are furnished with the **ADG** Anchor Down for **SUPERSPEED®** labor saving installation.

The **KC-SSTDs** System is designed to provide for a continuous load path for multi-story resistance to overturning and uplift to high winds or earthquake events.

The system utilizes multiple components manufactured by **KC® Metals** as well as readily available wood framing members. The components manufactured by **KC® Metals** products are stocked and thus available for quick turnaround, no more expensive delays waiting for special hardware to be manufactured.



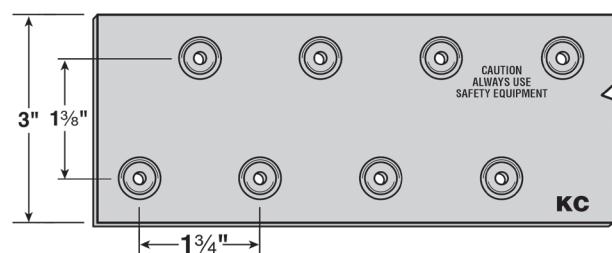
CNS
CNSI
CNS KIP

CALIFORNIA NAIL STRAPS EMBOSSED TIE STRAPS AND DIAPHRAGM STRAPS

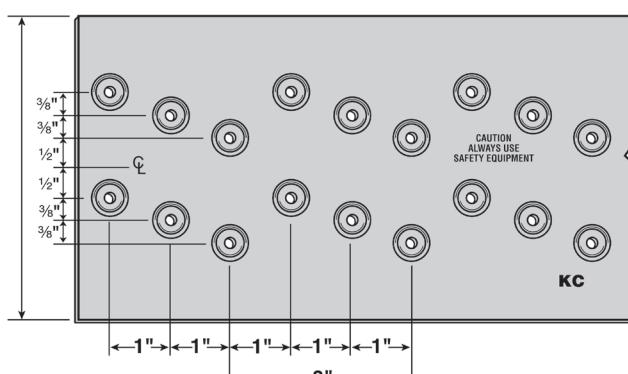
Design Features . . The **CNS** straps are designed to transfer tension forces between framing members using nails. The **CNS** series are designed for use with a nominal 4X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired.

The **CNS KIP** straps are designed to transfer tension forces between two framing members using nails. The **CNS KIP** series are designed for use with a nominal 4X framing member. The product is manufactured from galvanized steel and is embossed for use with gun nails where desired. This series of straps are designed for use with hardened steel gun nails, blending yield strength of 200Ksi, readily available to the roof erectors.

The **CNS KIP** straps are designed primarily for use on vertical framing. The heavy gage steel combined with a wide cross section and use of hardened gun nails gives much higher loads than other available straps. All products are embossed for use with nail guns.



CNS
Nail Hole Pattern Typical
for Length of Strap



CNS KIP
Nail Hole Pattern Typical
for Length of Strap

CALIFORNIA ANCHOR DOWN SYSTEM

CADS43 California Anchor Down System

CADS

Provides for continuous load path for 4 stories.

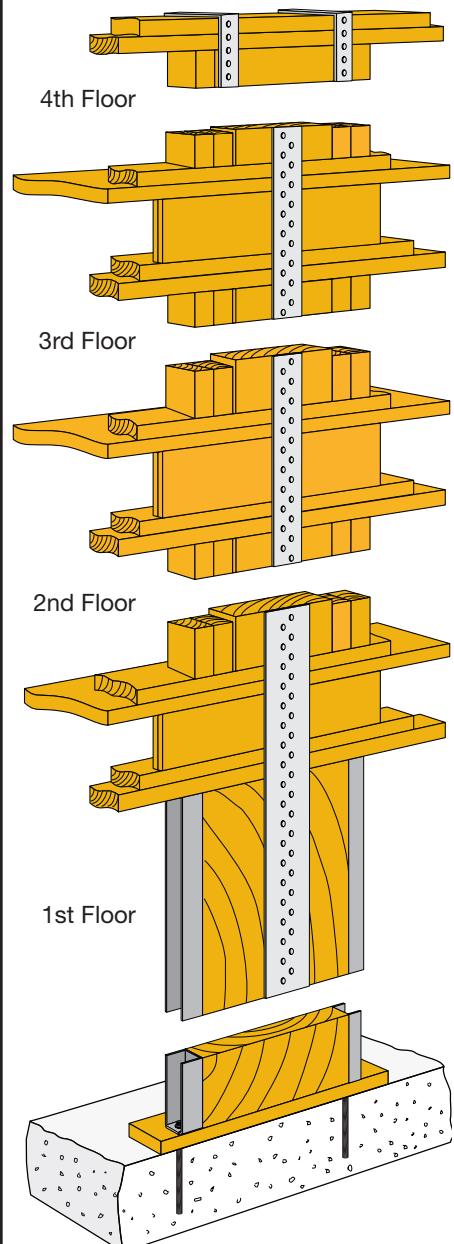
ICC-ESR 2860 — CNS Straps.

FLOOR LEVEL	MODEL NUMBER	WOOD POST SIZE	FASTENER SCHEDULE	ALLOWABLE TENSION LOADS	
				100%	133%
4th Floor	1 Each CNS72	4 x 6	80-16d X 2½" Hard 40-Per Floor	6830	9110
3rd Floor	1 Each CNS72	4 x 6	80-16d X 2½" Hard 40-Per Floor	6830	9110
2nd Floor	1 Each CNS10KIP	4 x 8	108-16d X 2½" Hard 54-Per Floor	8720	11595
1st Floor	2 Each* ADG8	4 x 10	22-SDS ^{1/4} X3SS Per ADG5	13540	18010

* See #1) Below

- 1) **ADG8** attachment to concrete foundation requires minimum 2 – 7/8" diameter anchor bolts. Anchor bolt and concrete design are the responsibility of the engineer of record.
- 2) Wood post material to be Douglas Fir Larch specific gravity of 0.50. Barrier material is required between base of ADG8 and pressure treated wood contact. Fasten 2 x 4 studs on 2nd, 3rd, and 4th floor to wood posts.
- 3) **KC® SUPERSPEED® SDS1/4X3 Drive Screws** are special heat treated screws supplied with the ADST5G. Install screws using a 1/2" drive variable speed drill, 5.5 amps or larger and a 3/8" hex head driver.
- 4) 16d x 2½" hardened nails are 0.162 inch diameter x 2½" long with a bending yield strength of 200 Ksi (supplied).

2 – SPTH4 Top Plates to Studs



Note: Concrete design is the responsibility of Engineer of Record.

KC[®] METALS

SUPERSPEED[®] CONNECTORS

KC[®] Metal Products, Inc. **KC[®] South Metals**

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San Jose, CA 95131 Riverside, CA 92504
(408) 436-8754 (951) 354-7181
FAX: (408) 436-0938 FAX: (951) 354-5212

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Loads in this catalog are for the described specific applications of properly installed products. Product modifications, improper loading, installation procedures, or deviations from recommended applications will affect connector load-carrying capacities. Connectors are steel and can corrode and lose load-carrying capacity if exposed to ocean salt air, corrosive fire-retardant chemicals, fertilizers, or other substances that adversely affect steel.

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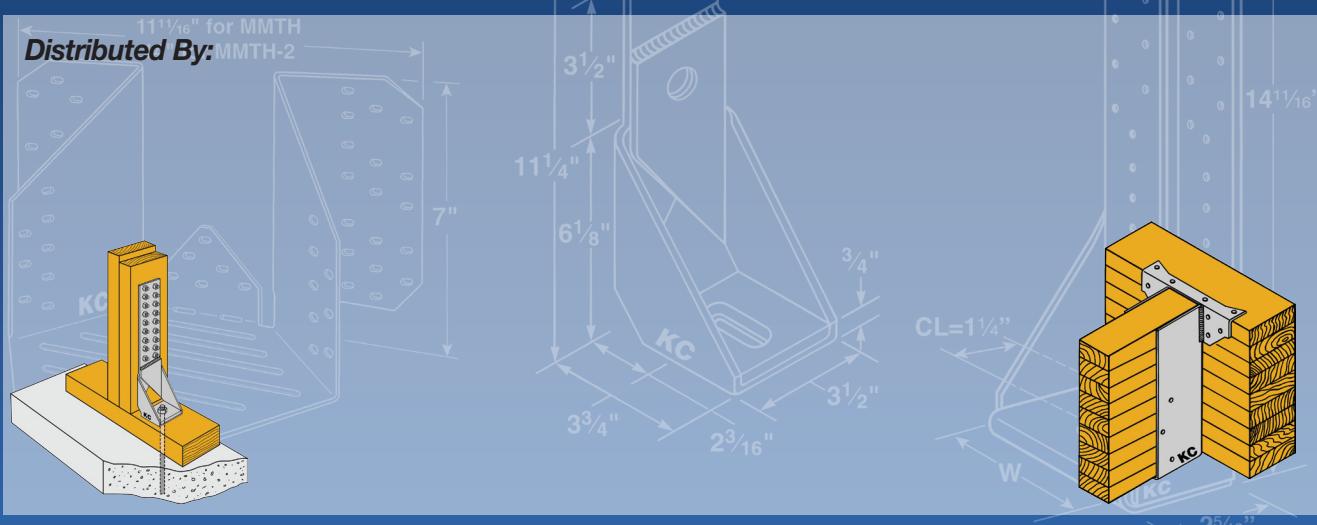
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