

TECHNICAL BULLETIN

CONNECTORS INSTALLED ON SCL COLUMNS



LIMIT STATES DESIGN

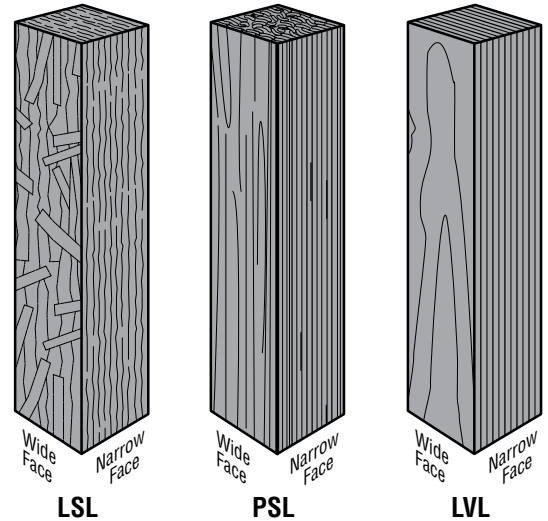


Attachments made to structural composite lumber (SCL) often use a variety of Simpson Strong-Tie® connectors. It is important to observe that there are two different surface sides to SCL, each having different structural properties. This technical bulletin addresses the difference in connector capacity based upon which surface the attachments are made.

SCL is made from layers of either thin veneer sheets (LVL), long thin veneer strands (PSL) or smaller thin strands (LSL). Even on square posts, each of these SCL types has a lumber face that can be referred to as “wide” and another that can be referred to as “narrow.”

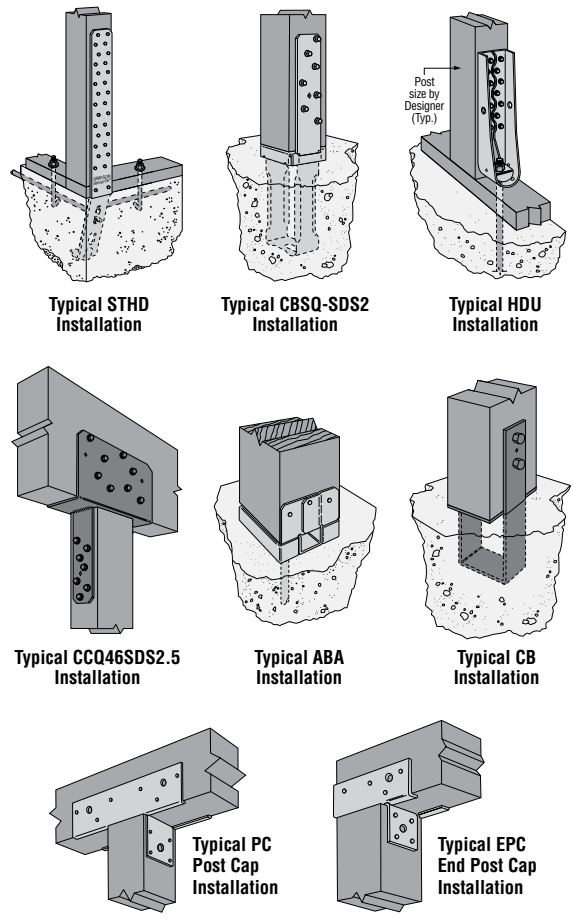
The narrow face is the surface that shows all of the thin edges of the SCL layers. In contrast, the wide face is the surface that shows the broader, wider strand or veneer face. If the cross section dimensions are not square (e.g. 3½ x 5¼), then the narrow dimension will always be the narrow face which shows the edges.

Simpson Strong-Tie recommends that connectors be attached to the wide face of SCL columns to achieve full factored resistances listed in the current Canadian Limit States Design catalogue. If connectors are installed onto the narrow face of SCL columns, reduction factors apply (see table below). For fastener design information, refer to the SCL manufacturer’s code reports or literature.



Reduction Factors for Narrow Face SCL Installations

Connector Type	Applicable Simpson Strong-Tie Connector Series	Reduction Factors ^{1,2} by SCL Type		
		LSL	PSL	LVL
Column Bases and Column Caps ²	CC, ECC, CB, LCB (bolted only), CBGT	1.00	0.90	0.80
	CCQ, ECCQ, CBSQ, CBQ, CBQGT	0.90	0.85	0.85
	BC, AC, ACE, PC, LPC, ABA, ABE	0.90	0.80	0.80
	ABU, PB, PBS, EPB, LCB (nailed only)	Do not use in narrow face		
Miscellaneous Nailed Applications	HTT22, LTT20B, LTTI31, FSC, STHD ³ , LSTHD ³	0.90	0.75	0.75
	HTT16, LTT19, LCE	0.80	0.65	0.65
	Nailed Straps, PAI, PAHD, HPAHD	Do not use in narrow face		
Holdowns – SDS Screw Applications	HDU2, HDU4, HDU5, HDC5, PHD2, PHD5, PHD6	0.80	0.65	0.65
	HDU8, HDU11, HDU14, HDC10, HDQ8, HHDQ11, HHDQ14	0.70	0.70	0.70
Holdowns – Bolted Applications	HD2A, HD5A	0.75	0.60	0.50
	HD6A, HD8A, HD10A, HD14A, HD15	0.70	0.45	0.45



1. Reduction factors apply to narrow face installations only and are applied to factored resistances published in the current *Wood Construction Connectors* catalogue Canadian Limit States version. Published DF/SP and SPF factored resistances assume a specific gravity of 0.50 and 0.42 respectively. Refer to SCL manufacturer’s literature to determine equivalent specific gravity.
2. For column caps and bases, reduction factors apply to uplift loads only. For download and lateral directions use full published factored resistances.
3. STHD and LSTHD installations on SCL are limited to 2x sill plates.



This technical bulletin is effective until **June 30, 2011**, and reflects information available as of July 1, 2009. This information is updated periodically and should not be relied upon after **June 30, 2011**; contact Simpson for current information and limited warranty or see www.strongtie.com.

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