

Table 7-4
Available Bearing and Tearout
Strength at Bolt Holes
Based on Bolt Spacing
kip/in. thickness

$F_u = 65 \text{ ksi}$

Hole Type	Bolt Spacing, s, in.	Nominal Bolt Diameter, d, in.							
		5/8		3/4		7/8		1	
		r_n/Ω	ϕr_n	r_n/Ω	ϕr_n	r_n/Ω	ϕr_n	r_n/Ω	ϕr_n
		ASD	LRFD	ASD	LRFD	ASD	LRFD	ASD	LRFD
STD SSLT	2⅔d	38.2	57.3	46.3	69.5	54.4	81.7	60.1	90.2
	3 in.	48.8	73.1	58.5	87.8	68.3	102	73.1	110
SSLP	2⅔d	30.9	46.3	39.0	58.5	47.1	70.7	52.8	79.2
	3 in.	48.8	73.1	58.5	87.8	68.3	102	65.8	98.7
OVS	2⅔d	33.3	50.0	41.4	62.2	49.6	74.3	55.3	82.9
	3 in.	48.8	73.1	58.5	87.8	68.3	102	68.3	102
LSLP	2⅔d	4.06	6.09	4.88	7.31	5.69	8.53	6.50	9.75
	3 in.	48.8	73.1	43.9	65.8	31.7	47.5	19.5	29.3
LSLT	2⅔d	31.8	47.7	38.6	57.9	45.4	68.0	50.1	75.2
	3 in.	40.6	60.9	48.8	73.1	56.9	85.3	60.9	91.4
STD, SSLT, SSLP, OVS, LSLP	$s \geq s_{full}$	48.8	73.1	58.5	87.8	68.3	102	78.0	117
LSLT	$s \geq s_{full}$	40.6	60.9	48.8	73.1	56.9	85.3	65.0	97.5
Spacing for full bearing and tearout strength, $s_{full}^{[a]}$, in.	STD, SSLT, LSLT	1 ¹⁵ / ₁₆		2 ⁵ / ₁₆		2 ¹¹ / ₁₆		3 ¹ / ₈	
	OVS	2 ¹ / ₁₆		2 ⁷ / ₁₆		2 ¹³ / ₁₆		3 ¹ / ₄	
	SSLP	2 ¹ / ₈		2 ¹ / ₂		2 ⁷ / ₈		3 ⁵ / ₁₆	
	LSLP	2 ¹³ / ₁₆		3 ³ / ₈		3 ¹⁵ / ₁₆		4 ¹ / ₂	
Minimum Spacing ^[a] = 2⅔d, in.		1 ¹¹ / ₁₆		2		2 ⁵ / ₁₆		2 ¹¹ / ₁₆	
STD = standard hole SSLT = short-slotted hole oriented with length transverse to the line of force SSLP = short-slotted hole oriented with length parallel to the line of force OVS = oversized hole LSLP = long-slotted hole oriented with length parallel to the line of force LSLT = long-slotted hole oriented with length transverse to the line of force									
ASD	LRFD	^[a] Decimal value has been rounded to the nearest sixteenth of an inch. Note: Spacing indicated is from the center of the hole or slot to the center of the adjacent hole or slot in the line of force. Hole deformation is considered. When hole deformation is not considered, see AISC Specification Section J3.11.							
Ω = 2.00	φ = 0.75								