

Table 7-5
Available Bearing and Tearout
Strength at Bolt Holes
Based on Edge Distance
kip/in. thickness

$F_u = 65 \text{ ksi}$

Hole Type	Edge Distance, l_e , in.	Nominal Bolt Diameter, d , in.							
		$\frac{5}{8}$		$\frac{3}{4}$		$\frac{7}{8}$		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	1¼	35.3	53.0	32.9	49.4	30.5	45.7	26.8	40.2
	2	48.8	73.1	58.5	87.8	59.7	89.6	56.1	84.1
SSLP	1¼	31.7	47.5	29.3	43.9	26.8	40.2	23.2	34.7
	2	48.8	73.1	58.5	87.8	56.1	84.1	52.4	78.6
OVS	1¼	32.9	49.4	30.5	45.7	28.0	42.0	24.4	36.6
	2	48.8	73.1	58.5	87.8	57.3	85.9	53.6	80.4
LSLP	1¼	18.3	27.4	12.2	18.3	6.09	9.14	—	—
	2	47.5	71.3	41.4	62.2	35.3	53.0	29.3	43.9
LSLT	1¼	29.5	44.2	27.4	41.1	25.4	38.1	22.3	33.5
	2	40.6	60.9	48.8	73.1	49.8	74.6	46.7	70.1
STD, SSLT, SSLP, OVS, LSLP	$l_e \geq l_{e \text{ full}}$	48.8	73.1	58.5	87.8	68.3	102	78.0	117
LSLT	$l_e \geq l_{e \text{ full}}$	40.6	60.9	48.8	73.1	56.9	85.3	65.0	97.5
Edge distance for full bearing and tearout strength, $l_e \geq l_{e \text{ full}}^{[a]}$, in.	STD, SSLT, LSLT	1 $\frac{5}{8}$		1 $\frac{15}{16}$		2¼		2 $\frac{9}{16}$	
	OVS	1 $\frac{11}{16}$		2		2 $\frac{5}{16}$		2 $\frac{5}{8}$	
	SSLP	1 $\frac{11}{16}$		2		2 $\frac{5}{16}$		2 $\frac{11}{16}$	
	LSLP	2¼		2 $\frac{7}{16}$		2 $\frac{7}{8}$		3¼	

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	— Indicates edge distance less than minimum required per AISC Specification Section J3.5. [a] Decimal value has been rounded to the nearest sixteenth of an inch. Note: Edge distance indicated is from the center of the hole or slot to the to the edge of the element in the line of force. Hole deformation is considered. When hole deformation is not considered, see AISC Specification Section J3.11.
$\Omega = 2.00$	$\phi = 0.75$	