



## SIN Concentrated Load

Imperial

### Constants

$F_y$	50.8 ksi
$\phi_s$	0.8

### Concentrated Load Resistance (kip)

Web $t_w$ (in)		WT0 0.0598								
		Bearing Length (in)								
$t_f$ (mm)		0	2	4	6	8	10	12	14	16
1/4		3.04	7.89	12.75	17.61	22.46	27.32	32.18	37.03	41.89
5/16		3.79	8.65	13.51	18.37	23.22	28.08	32.94	37.79	42.65
3/8		4.55	9.41	14.27	19.12	23.98	28.84	33.70	38.55	43.41
1/2		6.07	10.93	15.79	20.64	25.50	30.36	35.21	40.07	44.93
5/8		7.59	12.45	17.30	22.16	27.02	31.87	36.73	41.59	46.45
3/4		9.11	13.96	18.82	23.68	28.54	33.39	38.25	43.11	47.96
1		12.14	17.00	21.86	26.71	31.57	36.43	41.28	46.14	51.00

Web $t_w$ (in)		WTA 0.0747								
		Bearing Length (in)								
$t_f$ (mm)		0	2	4	6	8	10	12	14	16
1/4		3.79	9.86	15.93	21.99	28.06	34.13	40.20	46.26	52.33
5/16		4.74	10.81	16.87	22.94	29.01	35.08	41.14	47.21	53.28
3/8		5.69	11.76	17.82	23.89	29.96	36.02	42.09	48.16	54.23
1/2		7.58	13.65	19.72	25.79	31.85	37.92	43.99	50.05	56.12
5/8		9.48	15.55	21.61	27.68	33.75	39.82	45.88	51.95	58.02
3/4		11.38	17.44	23.51	29.58	35.64	41.71	47.78	53.85	59.91
1		15.17	21.24	27.30	33.37	39.44	45.50	51.57	57.64	63.71

Web $t_w$ (in)		WTB 0.1046								
		Bearing Length (in)								
$t_f$ (mm)		0	2	4	6	8	10	12	14	16
1/4		5.31	13.81	22.30	30.80	39.29	47.79	56.28	64.78	73.28
5/16		6.64	15.13	23.63	32.12	40.62	49.12	57.61	66.11	74.60
3/8		7.96	16.46	24.96	33.45	41.95	50.44	58.94	67.43	75.93
1/2		10.62	19.12	27.61	36.11	44.60	53.10	61.59	70.09	78.59
5/8		13.27	21.77	30.27	38.76	47.26	55.75	64.25	72.74	81.24
3/4		15.93	24.43	32.92	41.42	49.91	58.41	66.90	75.40	83.90
1		21.24	29.74	38.23	46.73	55.22	63.72	72.21	80.71	89.21

Web $t_w$ (in)		WTC 0.1196								
		Bearing Length (in)								
$t_f$ (mm)		0	2	4	6	8	10	12	14	16
1/4		6.07	15.79	25.50	35.21	44.93	54.64	64.36	74.07	83.78
5/16		7.59	17.30	27.02	36.73	46.45	56.16	65.87	75.59	85.30
3/8		9.11	18.82	28.54	38.25	47.96	57.68	67.39	77.11	86.82
1/2		12.14	21.86	31.57	41.28	51.00	60.71	70.43	80.14	89.85
5/8		15.18	24.89	34.61	44.32	54.03	63.75	73.46	83.18	92.89
3/4		18.21	27.93	37.64	47.36	57.07	66.78	76.50	86.21	95.93
1		24.29	34.00	43.71	53.43	63.14	72.86	82.57	92.28	102.00



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### Concentrated Load Resistance (kip)

Web		WTF								
$t_w$ (in)		0.1644								
		Bearing Length (in)								
$t_f$ (mm)		0	2	4	6	8	10	12	14	16
1/4		8.35	21.70	35.05	48.40	61.76	75.11	88.46	101.81	115.17
5/16		10.43	23.78	37.14	50.49	63.84	77.20	90.55	103.90	117.25
3/8		12.52	25.87	39.22	52.58	65.93	79.28	92.63	105.99	119.34
1/2		16.69	30.04	43.40	56.75	70.10	83.45	96.81	110.16	123.51
5/8		20.86	34.22	47.57	60.92	74.27	87.63	100.98	114.33	127.69
3/4		25.04	38.39	51.74	65.09	78.45	91.80	105.15	118.51	131.86
1		33.38	46.73	60.09	73.44	86.79	100.15	113.50	126.85	140.20

Web		WTH								
$t_w$ (in)		0.1943								
		Bearing Length (in)								
$t_f$ (mm)		0	2	4	6	8	10	12	14	16
1/4		9.86	25.64	41.43	57.21	72.99	88.77	104.55	120.33	136.11
5/16		12.33	28.11	43.89	59.67	75.45	91.24	107.02	122.80	138.58
3/8		14.79	30.58	46.36	62.14	77.92	93.70	109.48	125.26	141.05
1/2		19.73	35.51	51.29	67.07	82.85	98.63	114.41	130.20	145.98
5/8		24.66	40.44	56.22	72.00	87.78	103.56	119.35	135.13	150.91
3/4		29.59	45.37	61.15	76.93	92.71	108.50	124.28	140.06	155.84
1		39.45	55.23	71.02	86.80	102.58	118.36	134.14	149.92	165.70

Web		WTK								
$t_w$ (in)		0.2391								
		Bearing Length (in)								
$t_f$ (mm)		0	2	4	6	8	10	12	14	16
1/4		12.14	31.56	50.98	70.40	89.82	109.24	128.66	148.08	167.50
5/16		15.17	34.59	54.01	73.43	92.85	112.27	131.69	151.11	170.53
3/8		18.21	37.63	57.05	76.47	95.89	115.31	134.73	154.15	173.57
1/2		24.27	43.69	63.11	82.53	101.95	121.37	140.79	160.21	179.63
5/8		30.34	49.76	69.18	88.60	108.02	127.44	146.86	166.28	185.70
3/4		36.41	55.83	75.25	94.67	114.09	133.51	152.93	172.35	191.77
1		48.55	67.97	87.39	106.81	126.23	145.65	165.07	184.49	203.91