

Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h_w in	Flange		Area A in^2	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in^4	Warping C_w in^6	Moment Resistance		Mass							
		Width b_f in	Thickness t_f in			I_x in^4	S_x in^3	I_y in^4	S_y in^3			M_r kip ft	L_u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_333/127x6	13.1	5.0	x	0.250	2.50	13.61	129	16.4	6.0	2.1	0.052	289	62.4	75	11.7	12.5	14.2	15.0	17.4	19.0	21.4
WT_333/152x6		6.0	x		2.69	13.61	139	17.6	7.5	2.4	0.056	360	67.2	81	13.4	14.2	15.9	16.7	19.1	20.7	23.1
WT_333/152x8		6.0	x	0.313	3.75	13.74	195	24.6	13.0	3.8	0.122	629	93.7	91	16.0	16.8	18.4	19.2	21.6	23.3	25.7
WT_333/152x10		6.0	x	0.375	4.50	13.86	236	29.5	15.6	4.5	0.211	762	112.4	92	18.5	19.3	20.9	21.8	24.2	25.8	28.2
WT_333/178x10		7.0	x		5.25	13.86	276	34.4	24.8	6.1	0.246	1210	131.2	107	21.1	21.9	23.5	24.3	26.7	28.3	30.8
WT_333/152x13		6.0	x	0.500	6.00	14.11	321	39.4	20.8	6.0	0.500	1035	150.0	94	23.6	24.4	26.0	26.9	29.3	30.9	33.3
WT_333/178x13		7.0	x		7.00	14.11	375	46.0	33.0	8.2	0.583	1644	175.0	110	27.0	27.8	29.4	30.2	32.7	34.3	36.7
WT_333/203x13		8.0	x		8.00	14.11	428	52.5	49.3	10.7	0.667	2453	200.0	126	30.4	31.2	32.8	33.6	36.1	37.7	40.1
WT_333/152x19		6.0	x	0.750	9.00	14.61	500	59.2	31.2	9.0	1.688	1610	225.5	101	33.8	34.6	36.2	37.0	39.5	41.1	43.5
WT_333/203x16		8.0	x	0.625	10.00	14.36	545	65.7	61.6	13.3	1.302	3123	250.3	130	37.2	38.0	39.6	40.4	42.9	44.5	46.9
WT_333/203x19		8.0	x	0.750	12.00	14.61	666	79.0	73.9	16.0	2.250	3817	300.7	134	44.0	44.8	46.4	47.2	49.7	51.3	53.7
WT_333/254x19		10.0	x		15.00	14.61	833	98.7	144.4	25.0	2.813	7454	375.8	168	54.2	55.0	56.6	57.4	59.8	61.5	63.9
WT_333/203x25		8.0	x	1.000	16.00	15.11	922	105.6	98.6	21.3	5.333	5274	402.0	146	57.6	58.4	60.0	60.8	63.2	64.9	67.3
WT_333/254x25		10.0	x		20.00	15.11	1152	132.0	192.5	33.3	6.667	10301	502.5	183	71.2	72.0	73.6	74.4	76.8	78.4	80.9
WT_333/279x25		11.0	x		22.00	15.11	1267	145.2	256.3	40.3	7.333	13710	552.7	201	78.0	78.8	80.4	81.2	83.6	85.2	87.7
WT_333/305x25		12.0	x		24.00	15.11	1382	158.4	332.7	48.0	8.000	17799	603.0	219	84.7	85.5	87.2	88.0	90.4	92.0	94.5
WT_333/254x32		10.0	x	1.250	25.00	15.61	1493	165.5	240.7	41.7	13.021	13336	630.3	201	88.1	88.9	90.6	91.4	93.8	95.4	97.8
WT_333/330x25		13.0	x	1.000	26.00	15.11	1498	171.6	423.0	56.3	8.667	22630	653.2	238	91.5	92.3	94.0	94.8	97.2	98.8	101.2
WT_333/356x25		14.0	x		28.00	15.11	1613	184.8	528.3	65.3	9.333	28265	703.5	256	98.3	99.1	100.8	101.6	104.0	105.6	108.0
WT_333/305x32		12.0	x	1.250	30.00	15.61	1791	198.7	415.9	60.0	15.625	23045	756.3	241	105.1	105.9	107.5	108.4	110.8	112.4	114.8
WT_333/406x25		16.0	x	1.000	32.00	15.11	1843	211.2	788.6	85.3	10.667	42191	804.0	292	111.9	112.7	114.3	115.1	117.6	119.2	121.6
WT_333/356x32		14.0	x	1.250	35.00	15.61	2090	231.8	660.4	81.7	18.229	36594	882.4	281	122.1	122.9	124.5	125.3	127.8	129.4	131.8
WT_333/406x32		16.0	x		40.00	15.61	2388	264.9	985.8	106.7	20.833	54625	1008.4	322	139.1	139.9	141.5	142.3	144.7	146.4	148.8
WT_333/450x32		17.7	x		44.29	15.61	2645	293.3	1338.3	130.8	23.068	74159	1116.6	356	153.7	154.5	156.1	156.9	159.3	160.9	163.4

Factored Shear Resistance V_r (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
13	13.6	18.0	27.4	32.3	47.2	56.0	68.9



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h _w in	Flange		Area in ²	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in ⁴	Warping C _w in ⁶	Moment Resistance		Mass							
		Width b _f in	Thickness t _f in			I _x in ⁴	S _x in ³	I _y in ⁴	S _y in ³			M _r kip ft	L _u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_440/127x6	17.3	5.0	x	0.250	2.50	17.82	223	21.7	6.0	2.1	0.052	499	82.5	75	12.8	13.8	16.0	17.0	20.3	22.4	25.6
WT_440/152x6		6.0	x		2.69	17.82	240	23.3	7.5	2.4	0.056	623	88.8	80	14.5	15.5	17.7	18.7	21.9	24.1	27.3
WT_440/152x8		6.0	x	0.313	3.75	17.95	337	32.5	13.0	3.8	0.122	1086	123.7	90	17.0	18.1	20.2	21.3	24.5	26.6	29.8
WT_440/152x10		6.0	x	0.375	4.50	18.07	407	39.0	15.6	4.5	0.211	1313	148.5	91	19.6	20.6	22.8	23.8	27.0	29.2	32.4
WT_440/178x10		7.0	x		5.25	18.07	475	45.5	24.8	6.1	0.246	2084	173.2	106	22.1	23.2	25.3	26.4	29.6	31.7	34.9
WT_440/152x13		6.0	x	0.500	6.00	18.32	551	52.0	20.8	6.0	0.500	1775	198.1	92	24.7	25.7	27.9	28.9	32.1	34.3	37.5
WT_440/178x13		7.0	x		7.00	18.32	642	60.7	33.0	8.2	0.583	2818	231.1	107	28.1	29.1	31.3	32.3	35.5	37.7	40.9
WT_440/203x13		8.0	x		8.00	18.32	734	69.4	49.3	10.7	0.667	4207	264.1	123	31.4	32.5	34.7	35.7	38.9	41.1	44.3
WT_440/152x19		6.0	x	0.750	9.00	18.82	849	78.1	31.2	9.0	1.688	2738	297.5	96	34.8	35.9	38.0	39.1	42.3	44.5	47.7
WT_440/203x16		8.0	x	0.625	10.00	18.57	931	86.8	61.6	13.3	1.302	5333	330.3	125	38.2	39.3	41.4	42.5	45.7	47.9	51.1
WT_440/203x19		8.0	x	0.750	12.00	18.82	1133	104.2	73.9	16.0	2.250	6489	396.6	128	45.0	46.1	48.2	49.3	52.5	54.7	57.9
WT_440/254x19		10.0	x		15.00	18.82	1416	130.2	144.4	25.0	2.813	12674	495.8	160	55.2	56.3	58.4	59.5	62.7	64.8	68.0
WT_440/203x25		8.0	x	1.000	16.00	19.32	1553	139.1	98.6	21.3	5.333	8893	529.7	135	58.6	59.7	61.8	62.9	66.1	68.2	71.4
WT_440/254x25		10.0	x		20.00	19.32	1941	173.9	192.5	33.3	6.667	17369	662.1	168	72.2	73.3	75.4	76.5	79.7	81.8	85.0
WT_440/279x25		11.0	x		22.00	19.32	2135	191.3	256.3	40.3	7.333	23118	728.4	185	79.0	80.1	82.2	83.3	86.5	88.6	91.8
WT_440/305x25		12.0	x		24.00	19.32	2329	208.7	332.7	48.0	8.000	30014	794.6	202	85.8	86.8	89.0	90.1	93.3	95.4	98.6
WT_440/254x32		10.0	x	1.250	25.00	19.82	2494	217.8	240.7	41.7	13.021	22308	829.4	179	89.2	90.2	92.4	93.5	96.7	98.8	102.0
WT_440/330x25		13.0	x	1.000	26.00	19.32	2523	226.1	423.0	56.3	8.667	38160	860.8	219	92.6	93.6	95.8	96.9	100.1	102.2	105.4
WT_440/356x25		14.0	x		28.00	19.32	2718	243.5	528.3	65.3	9.333	47661	927.0	236	99.4	100.4	102.6	103.6	106.9	109.0	112.2
WT_440/305x32		12.0	x	1.250	30.00	19.82	2993	261.4	415.9	60.0	15.625	38548	995.3	215	106.2	107.2	109.4	110.4	113.6	115.8	119.0
WT_440/406x25		16.0	x	1.000	32.00	19.32	3106	278.3	788.6	85.3	10.667	71144	1059.4	270	113.0	114.0	116.2	117.2	120.4	122.6	125.8
WT_440/356x32		14.0	x	1.250	35.00	19.82	3492	305.0	660.4	81.7	18.229	61213	1161.2	251	123.1	124.2	126.3	127.4	130.6	132.8	136.0
WT_440/406x32		16.0	x		40.00	19.82	3991	348.6	985.8	106.7	20.833	91374	1327.0	287	140.1	141.2	143.3	144.4	147.6	149.7	152.9
WT_440/450x32		17.7	x		44.29	19.82	4419	386.0	1338.3	130.8	23.068	124050	1469.4	318	154.7	155.8	157.9	159.0	162.2	164.3	167.5

Factored Shear Resistance Vr (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
17	17.5	23.3	35.6	42.0	61.8	74.0	91.0



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h_w in	Flange		Area A in^2	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in^4	Warping C_w in^6	Moment Resistance		Mass							
		Width b_f in	Thickness t_f in			I_x in^4	S_x in^3	I_y in^4	S_y in^3			M_r kip ft	L_u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
-	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_500/127x6	19.7	5.0	x	0.250	2.50	20.19	287	24.6	6.0	2.1	0.052	643	93.7	74	13.4	14.6	17.0	18.2	21.9	24.3	27.9
WT_500/152x6		6.0	x		2.69	20.19	309	26.5	7.5	2.4	0.056	801	100.9	80	15.0	16.3	18.7	19.9	23.6	26.0	29.6
WT_500/152x8		6.0	x	0.313	3.75	20.31	433	36.9	13.0	3.8	0.122	1397	140.6	90	17.6	18.8	21.2	22.5	26.1	28.5	32.2
WT_500/152x10		6.0	x	0.375	4.50	20.44	523	44.3	15.6	4.5	0.211	1686	168.7	90	20.1	21.4	23.8	25.0	28.6	31.1	34.7
WT_500/178x10		7.0	x		5.25	20.44	610	51.7	24.8	6.1	0.246	2678	196.8	105	22.7	23.9	26.3	27.6	31.2	33.6	37.3
WT_500/152x13		6.0	x	0.500	6.00	20.69	706	59.1	20.8	6.0	0.500	2277	225.0	91	25.2	26.4	28.9	30.1	33.7	36.2	39.8
WT_500/178x13		7.0	x		7.00	20.69	824	69.0	33.0	8.2	0.583	3615	262.5	107	28.6	29.8	32.3	33.5	37.1	39.6	43.2
WT_500/203x13		8.0	x		8.00	20.69	942	78.8	49.3	10.7	0.667	5396	300.0	122	32.0	33.2	35.7	36.9	40.5	43.0	46.6
WT_500/152x19		6.0	x	0.750	9.00	21.19	1086	88.7	31.2	9.0	1.688	3500	337.9	94	35.4	36.6	39.1	40.3	43.9	46.4	50.0
WT_500/203x16		8.0	x	0.625	10.00	20.94	1192	98.5	61.6	13.3	1.302	6829	375.2	124	38.8	40.0	42.5	43.7	47.3	49.8	53.4
WT_500/203x19		8.0	x	0.750	12.00	21.19	1448	118.3	73.9	16.0	2.250	8296	450.5	126	45.6	46.8	49.3	50.5	54.1	56.5	60.2
WT_500/254x19		10.0	x		15.00	21.19	1810	147.9	144.4	25.0	2.813	16203	563.1	157	55.8	57.0	59.4	60.7	64.3	66.7	70.4
WT_500/203x25		8.0	x	1.000	16.00	21.69	1979	158.0	98.6	21.3	5.333	11334	601.4	131	59.2	60.4	62.8	64.1	67.7	70.1	73.8
WT_500/254x25		10.0	x		20.00	21.69	2473	197.5	192.5	33.3	6.667	22136	751.8	164	72.8	74.0	76.4	77.6	81.3	83.7	87.4
WT_500/279x25		11.0	x		22.00	21.69	2721	217.2	256.3	40.3	7.333	29464	827.0	181	79.6	80.8	83.2	84.4	88.1	90.5	94.1
WT_500/305x25		12.0	x		24.00	21.69	2968	237.0	332.7	48.0	8.000	38252	902.2	197	86.4	87.6	90.0	91.2	94.9	97.3	100.9
WT_500/254x32		10.0	x	1.250	25.00	22.19	3168	247.2	240.7	41.7	13.021	28343	941.3	172	89.8	91.0	93.4	94.6	98.3	100.7	104.3
WT_500/330x25		13.0	x	1.000	26.00	21.69	3215	256.7	423.0	56.3	8.667	48634	977.3	213	93.2	94.4	96.8	98.0	101.7	104.1	107.7
WT_500/356x25		14.0	x		28.00	21.69	3463	276.5	528.3	65.3	9.333	60742	1052.5	230	100.0	101.2	103.6	104.8	108.5	110.9	114.5
WT_500/305x32		12.0	x	1.250	30.00	22.19	3802	296.7	415.9	60.0	15.625	48977	1129.5	207	106.7	108.0	110.4	111.6	115.2	117.7	121.3
WT_500/406x25		16.0	x	1.000	32.00	21.69	3957	315.9	788.6	85.3	10.667	90671	1202.9	263	113.5	114.7	117.2	118.4	122.0	124.5	128.1
WT_500/356x32		14.0	x	1.250	35.00	22.19	4435	346.1	660.4	81.7	18.229	77774	1317.8	242	123.7	124.9	127.4	128.6	132.2	134.7	138.3
WT_500/406x32		16.0	x		40.00	22.19	5069	395.6	985.8	106.7	20.833	116095	1506.1	276	140.7	141.9	144.3	145.6	149.2	151.6	155.3
WT_500/450x32		17.7	x		44.29	22.19	5613	438.0	1338.3	130.8	23.068	157612	1667.6	306	155.3	156.5	158.9	160.1	163.8	166.2	169.9

Factored Shear Resistance V_r (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
20	19.6	26.2	40.2	47.4	69.9	84.1	103.5



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h _w in	Flange		Area in ²	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in ⁴	Warping C _w in ⁶	Moment Resistance		Mass							
		Width b _f in	Thickness t _f in			I _x in ⁴	S _x in ³	I _y in ⁴	S _y in ³			M _r kip ft	L _u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_610/127x6	24.0	5.0	x	0.250	2.50	24.50	425	30.0	6.0	2.1	0.052	951	114.2	74	14.4	15.9	18.9	20.3	24.8	27.7	32.2
WT_610/152x6		6.0	x		2.69	24.50	457	32.3	7.5	2.4	0.056	1186	123.0	80	16.1	17.6	20.6	22.0	26.5	29.4	33.9
WT_610/152x8		6.0	x	0.313	3.75	24.63	640	45.0	13.0	3.8	0.122	2064	171.4	89	18.7	20.1	23.1	24.6	29.0	32.0	36.4
WT_610/152x10		6.0	x	0.375	4.50	24.75	772	54.0	15.6	4.5	0.211	2490	205.7	90	21.2	22.7	25.6	27.1	31.6	34.5	39.0
WT_610/178x10		7.0	x		5.25	24.75	901	63.0	24.8	6.1	0.246	3954	239.9	105	23.8	25.2	28.2	29.7	34.1	37.1	41.5
WT_610/152x13		6.0	x	0.500	6.00	25.00	1040	72.0	20.8	6.0	0.500	3354	274.3	90	26.3	27.8	30.7	32.2	36.7	39.6	44.1
WT_610/178x13		7.0	x		7.00	25.00	1214	84.0	33.0	8.2	0.583	5326	320.0	106	29.7	31.2	34.1	35.6	40.1	43.0	47.5
WT_610/203x13		8.0	x		8.00	25.00	1387	96.1	49.3	10.7	0.667	7950	365.7	121	33.1	34.6	37.5	39.0	43.5	46.4	50.9
WT_610/152x19		6.0	x	0.750	9.00	25.50	1593	108.1	31.2	9.0	1.688	5134	411.7	93	36.5	38.0	40.9	42.4	46.9	49.8	54.3
WT_610/203x16		8.0	x	0.625	10.00	25.25	1752	120.1	61.6	13.3	1.302	10039	457.3	122	39.9	41.4	44.3	45.8	50.3	53.2	57.7
WT_610/203x19		8.0	x	0.750	12.00	25.50	2124	144.2	73.9	16.0	2.250	12170	548.9	124	46.7	48.2	51.1	52.6	57.0	60.0	64.4
WT_610/254x19		10.0	x		15.00	25.50	2655	180.2	144.4	25.0	2.813	23769	686.1	155	56.9	58.3	61.3	62.8	67.2	70.2	74.6
WT_610/203x25		8.0	x	1.000	16.00	26.00	2890	192.4	98.6	21.3	5.333	16556	732.6	127	60.3	61.7	64.7	66.2	70.6	73.6	78.0
WT_610/254x25		10.0	x		20.00	26.00	3612	240.5	192.5	33.3	6.667	32335	915.7	159	73.8	75.3	78.3	79.8	84.2	87.2	91.6
WT_610/279x25		11.0	x		22.00	26.00	3973	264.6	256.3	40.3	7.333	43038	1007.3	175	80.6	82.1	85.1	86.6	91.0	94.0	98.4
WT_610/305x25		12.0	x		24.00	26.00	4334	288.6	332.7	48.0	8.000	55875	1098.8	191	87.4	88.9	91.9	93.4	97.8	100.8	105.2
WT_610/254x32		10.0	x	1.250	25.00	26.50	4607	301.0	240.7	41.7	13.021	41231	1145.9	165	90.8	92.3	95.3	96.8	101.2	104.2	108.6
WT_610/330x25		13.0	x	1.000	26.00	26.00	4696	312.7	423.0	56.3	8.667	71040	1190.4	207	94.2	95.7	98.7	100.2	104.6	107.6	112.0
WT_610/356x25		14.0	x		28.00	26.00	5057	336.7	528.3	65.3	9.333	88728	1282.0	223	101.0	102.5	105.5	106.9	111.4	114.3	118.8
WT_610/305x32		12.0	x	1.250	30.00	26.50	5529	361.2	415.9	60.0	15.625	71248	1375.1	198	107.8	109.3	112.2	113.7	118.2	121.1	125.6
WT_610/406x25		16.0	x	1.000	32.00	26.00	5779	384.8	788.6	85.3	10.667	132445	1465.1	255	114.6	116.1	119.0	120.5	125.0	127.9	132.4
WT_610/356x32		14.0	x	1.250	35.00	26.50	6450	421.4	660.4	81.7	18.229	113139	1604.3	231	124.8	126.3	129.2	130.7	135.2	138.1	142.6
WT_610/406x32		16.0	x		40.00	26.50	7371	481.6	985.8	106.7	20.833	168884	1833.5	264	141.8	143.2	146.2	147.7	152.1	155.1	159.5
WT_610/450x32		17.7	x		44.29	26.50	8162	533.2	1338.3	130.8	23.068	229279	2030.2	292	156.3	157.8	160.8	162.3	166.7	169.7	174.1

Factored Shear Resistance Vr (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
24	23.5	31.5	48.5	57.3	84.8	102.5	126.1



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h _w in	Flange		Area in ²	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in ⁴	Warping C _w in ⁶	Moment Resistance		Mass							
		Width b _f in	Thickness t _f in			I _x in ⁴	S _x in ³	I _y in ⁴	S _y in ³			M _r kip ft	L _u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
-	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_750/127x6	29.5	5.0	x	0.250	2.50	30.03	640	36.9	6.0	2.1	0.052	1434	140.5	74	15.8	17.6	21.2	23.1	28.5	32.2	37.6
WT_750/152x6		6.0	x		2.69	30.03	689	39.7	7.5	2.4	0.056	1788	151.3	80	17.5	19.3	22.9	24.8	30.2	33.9	39.3
WT_750/152x8		6.0	x	0.313	3.75	30.15	964	55.4	13.0	3.8	0.122	3110	210.8	89	20.0	21.8	25.5	27.3	32.8	36.4	41.9
WT_750/152x10		6.0	x	0.375	4.50	30.28	1162	66.5	15.6	4.5	0.211	3747	253.0	89	22.6	24.4	28.0	29.9	35.3	39.0	44.4
WT_750/178x10		7.0	x		5.25	30.28	1356	77.5	24.8	6.1	0.246	5950	295.2	104	25.1	26.9	30.6	32.4	37.9	41.5	47.0
WT_750/152x13		6.0	x	0.500	6.00	30.53	1563	88.6	20.8	6.0	0.500	5038	337.4	90	27.7	29.5	33.1	35.0	40.4	44.1	49.5
WT_750/178x13		7.0	x		7.00	30.53	1823	103.4	33.0	8.2	0.583	8000	393.6	105	31.1	32.9	36.5	38.4	43.8	47.5	52.9
WT_750/203x13		8.0	x		8.00	30.53	2083	118.2	49.3	10.7	0.667	11942	449.8	120	34.5	36.3	39.9	41.8	47.2	50.9	56.3
WT_750/152x19		6.0	x	0.750	9.00	31.03	2383	133.0	31.2	9.0	1.688	7683	506.3	91	37.9	39.7	43.3	45.1	50.6	54.3	59.7
WT_750/203x16		8.0	x	0.625	10.00	30.78	2626	147.7	61.6	13.3	1.302	15052	562.4	121	41.3	43.1	46.7	48.5	54.0	57.7	63.1
WT_750/203x19		8.0	x	0.750	12.00	31.03	3178	177.3	73.9	16.0	2.250	18212	675.1	122	48.0	49.9	53.5	55.3	60.8	64.4	69.9
WT_750/254x19		10.0	x		15.00	31.03	3972	221.6	144.4	25.0	2.813	35571	843.8	153	58.2	60.0	63.7	65.5	71.0	74.6	80.1
WT_750/203x25		8.0	x	1.000	16.00	31.53	4308	236.6	98.6	21.3	5.333	24686	900.6	124	61.6	63.4	67.1	68.9	74.4	78.0	83.5
WT_750/254x25		10.0	x		20.00	31.53	5385	295.7	192.5	33.3	6.667	48215	1125.8	156	75.2	77.0	80.7	82.5	88.0	91.6	97.1
WT_750/279x25		11.0	x		22.00	31.53	5923	325.3	256.3	40.3	7.333	64174	1238.4	171	82.0	83.8	87.5	89.3	94.8	98.4	103.9
WT_750/305x25		12.0	x		24.00	31.53	6462	354.8	332.7	48.0	8.000	83315	1351.0	187	88.8	90.6	94.3	96.1	101.6	105.2	110.7
WT_750/254x32		10.0	x	1.250	25.00	32.03	6843	369.9	240.7	41.7	13.021	61259	1408.3	159	92.2	94.0	97.7	99.5	104.9	108.6	114.1
WT_750/330x25		13.0	x	1.000	26.00	31.53	7000	384.4	423.0	56.3	8.667	105928	1463.5	202	95.6	97.4	101.1	102.9	108.3	112.0	117.5
WT_750/356x25		14.0	x		28.00	31.53	7539	414.0	528.3	65.3	9.333	132301	1576.1	218	102.4	104.2	107.8	109.7	115.1	118.8	124.2
WT_750/305x32		12.0	x	1.250	30.00	32.03	8212	443.9	415.9	60.0	15.625	105856	1690.0	191	109.2	111.0	114.6	116.5	121.9	125.6	131.0
WT_750/406x25		16.0	x	1.000	32.00	31.53	8616	473.1	788.6	85.3	10.667	197487	1801.3	249	116.0	117.8	121.4	123.3	128.7	132.4	137.8
WT_750/356x32		14.0	x	1.250	35.00	32.03	9580	517.9	660.4	81.7	18.229	168096	1971.7	223	126.2	128.0	131.6	133.4	138.9	142.6	148.0
WT_750/406x32		16.0	x		40.00	32.03	10949	591.9	985.8	106.7	20.833	250919	2253.3	255	143.1	145.0	148.6	150.4	155.9	159.5	165.0
WT_750/450x32		17.7	x		44.29	32.03	12124	655.3	1338.3	130.8	23.068	340651	2495.1	283	157.7	159.5	163.2	165.0	170.5	174.1	179.6

Factored Shear Resistance Vr (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
30	28.4	38.2	59.2	70.0	103.8	126.1	155.2



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h_w in	Flange		Area A in^2	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in^4	Warping C_w in^6	Moment Resistance		Mass							
		Width b_f in	Thickness t_f in			I_x in^4	S_x in^3	I_y in^4	S_y in^3			M_r kip ft	L_u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
-	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_900/127x6	35.4	5.0	x	0.250	2.50	35.93	919	44.3	6.0	2.1	0.052	2059	168.6	74	17.2	19.4	23.8	26.0	32.5	36.9	43.5
WT_900/152x6		6.0	x		2.69	35.93	990	47.7	7.5	2.4	0.056	2567	181.5	80	18.9	21.1	25.5	27.7	34.2	38.6	45.2
WT_900/152x8		6.0	x	0.313	3.75	36.06	1384	66.4	13.0	3.8	0.122	4462	253.0	89	21.5	23.7	28.0	30.2	36.8	41.2	47.7
WT_900/152x10		6.0	x	0.375	4.50	36.18	1666	79.7	15.6	4.5	0.211	5373	303.6	89	24.0	26.2	30.6	32.8	39.3	43.7	50.3
WT_900/178x10		7.0	x		5.25	36.18	1944	93.0	24.8	6.1	0.246	8533	354.2	104	26.6	28.8	33.1	35.3	41.9	46.3	52.8
WT_900/152x13		6.0	x	0.500	6.00	36.43	2238	106.3	20.8	6.0	0.500	7215	404.8	89	29.1	31.3	35.7	37.9	44.4	48.8	55.4
WT_900/178x13		7.0	x		7.00	36.43	2611	124.0	33.0	8.2	0.583	11456	472.3	104	32.5	34.7	39.1	41.3	47.8	52.2	58.8
WT_900/203x13		8.0	x		8.00	36.43	2983	141.8	49.3	10.7	0.667	17101	539.7	119	35.9	38.1	42.5	44.7	51.2	55.6	62.2
WT_900/152x19		6.0	x	0.750	9.00	36.93	3404	159.5	31.2	9.0	1.688	10973	607.4	91	39.3	41.5	45.9	48.1	54.6	59.0	65.6
WT_900/203x16		8.0	x	0.625	10.00	36.68	3755	177.2	61.6	13.3	1.302	21525	674.8	120	42.7	44.9	49.3	51.5	58.0	62.4	68.9
WT_900/203x19		8.0	x	0.750	12.00	36.93	4538	212.7	73.9	16.0	2.250	26010	809.9	121	49.5	51.7	56.1	58.3	64.8	69.2	75.7
WT_900/254x19		10.0	x		15.00	36.93	5673	265.9	144.4	25.0	2.813	50800	1012.3	151	59.7	61.9	66.2	68.4	75.0	79.4	85.9
WT_900/203x25		8.0	x	1.000	16.00	37.43	6135	283.7	98.6	21.3	5.333	35161	1080.3	123	63.1	65.3	69.6	71.8	78.4	82.8	89.3
WT_900/254x25		10.0	x		20.00	37.43	7669	354.7	192.5	33.3	6.667	68673	1350.4	153	76.7	78.9	83.2	85.4	92.0	96.4	102.9
WT_900/279x25		11.0	x		22.00	37.43	8436	390.2	256.3	40.3	7.333	91404	1485.4	169	83.5	85.6	90.0	92.2	98.8	103.1	109.7
WT_900/305x25		12.0	x		24.00	37.43	9203	425.6	332.7	48.0	8.000	118667	1620.5	184	90.3	92.4	96.8	99.0	105.6	109.9	116.5
WT_900/254x32		10.0	x	1.250	25.00	37.93	9720	443.6	240.7	41.7	13.021	87023	1688.9	156	93.7	95.8	100.2	102.4	109.0	113.3	119.9
WT_900/330x25		13.0	x	1.000	26.00	37.43	9970	461.1	423.0	56.3	8.667	150875	1755.5	200	97.0	99.2	103.6	105.8	112.4	116.7	123.3
WT_900/356x25		14.0	x		28.00	37.43	10737	496.6	528.3	65.3	9.333	188439	1890.5	215	103.8	106.0	110.4	112.6	119.1	123.5	130.1
WT_900/305x32		12.0	x	1.250	30.00	37.93	11664	532.3	415.9	60.0	15.625	150376	2026.7	188	110.6	112.8	117.2	119.4	125.9	130.3	136.9
WT_900/406x25		16.0	x	1.000	32.00	37.43	12270	567.5	788.6	85.3	10.667	281285	2160.6	246	117.4	119.6	124.0	126.2	132.7	137.1	143.7
WT_900/356x32		14.0	x	1.250	35.00	37.93	13607	621.0	660.4	81.7	18.229	238792	2364.4	219	127.6	129.8	134.2	136.4	142.9	147.3	153.8
WT_900/406x32		16.0	x		40.00	37.93	15551	709.8	985.8	106.7	20.833	356448	2702.2	250	144.6	146.8	151.1	153.3	159.9	164.3	170.8
WT_900/450x32		17.7	x		44.29	37.93	17220	785.9	1338.3	130.8	23.068	483919	2992.1	277	159.2	161.3	165.7	167.9	174.5	178.8	185.4

Factored Shear Resistance V_r (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
35	33.6	45.3	70.5	83.5	124.0	151.3	186.2



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h _w in	Flange		Area in ²	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in ⁴	Warping C _w in ⁶	Moment Resistance		Mass							
		Width b _f in	Thickness t _f in			I _x in ⁴	S _x in ³	I _y in ⁴	S _y in ³			M _r kip ft	L _u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_1000/127x6	39.4	5.0	x	0.250	2.50	39.87	1133	49.2	6.0	2.1	0.052	2538	187.4	74	18.2	20.6	25.5	27.9	35.2	40.1	47.4
WT_1000/152x6		6.0	x		2.69	39.87	1220	53.0	7.5	2.4	0.056	3165	201.7	79	19.9	22.3	27.2	29.6	36.9	41.8	49.1
WT_1000/152x8		6.0	x	0.313	3.75	40.00	1705	73.8	13.0	3.8	0.122	5499	281.1	89	22.5	24.9	29.7	32.2	39.5	44.3	51.6
WT_1000/152x10		6.0	x	0.375	4.50	40.12	2053	88.6	15.6	4.5	0.211	6620	337.3	89	25.0	27.4	32.3	34.7	42.0	46.9	54.2
WT_1000/178x10		7.0	x		5.25	40.12	2395	103.4	24.8	6.1	0.246	10512	393.5	104	27.6	30.0	34.8	37.3	44.6	49.4	56.7
WT_1000/152x13		6.0	x	0.500	6.00	40.37	2755	118.1	20.8	6.0	0.500	8882	449.8	89	30.1	32.5	37.4	39.8	47.1	52.0	59.2
WT_1000/178x13		7.0	x		7.00	40.37	3214	137.8	33.0	8.2	0.583	14104	524.7	104	33.5	35.9	40.8	43.2	50.5	55.4	62.6
WT_1000/203x13		8.0	x		8.00	40.37	3673	157.5	49.3	10.7	0.667	21054	599.7	119	36.9	39.3	44.2	46.6	53.9	58.8	66.0
WT_1000/152x19		6.0	x	0.750	9.00	40.87	4184	177.2	31.2	9.0	1.688	13491	674.8	90	40.3	42.7	47.6	50.0	57.3	62.2	69.4
WT_1000/203x16		8.0	x	0.625	10.00	40.62	4620	196.9	61.6	13.3	1.302	26482	749.7	120	43.7	46.1	51.0	53.4	60.7	65.6	72.8
WT_1000/203x19		8.0	x	0.750	12.00	40.87	5579	236.3	73.9	16.0	2.250	31978	899.8	120	50.5	52.9	57.8	60.2	67.5	72.3	79.6
WT_1000/254x19		10.0	x		15.00	40.87	6974	295.4	144.4	25.0	2.813	62457	1124.7	151	60.7	63.1	67.9	70.4	77.7	82.5	89.8
WT_1000/203x25		8.0	x	1.000	16.00	41.37	7532	315.2	98.6	21.3	5.333	43170	1200.1	122	64.1	66.5	71.3	73.8	81.1	85.9	93.2
WT_1000/254x25		10.0	x		20.00	41.37	9416	394.0	192.5	33.3	6.667	84317	1500.1	153	77.6	80.1	84.9	87.4	94.6	99.5	106.8
WT_1000/279x25		11.0	x		22.00	41.37	10357	433.4	256.3	40.3	7.333	112226	1650.2	168	84.4	86.9	91.7	94.2	101.4	106.3	113.6
WT_1000/305x25		12.0	x		24.00	41.37	11299	472.8	332.7	48.0	8.000	145699	1800.2	183	91.2	93.7	98.5	101.0	108.2	113.1	120.4
WT_1000/254x32		10.0	x	1.250	25.00	41.87	11917	492.7	240.7	41.7	13.021	106705	1876.0	155	94.6	97.0	101.9	104.3	111.6	116.5	123.8
WT_1000/330x25		13.0	x	1.000	26.00	41.37	12240	512.2	423.0	56.3	8.667	185244	1950.2	198	98.0	100.4	105.3	107.7	115.0	119.9	127.2
WT_1000/356x25		14.0	x		28.00	41.37	13182	551.6	528.3	65.3	9.333	231365	2100.2	214	104.8	107.2	112.1	114.5	121.8	126.7	134.0
WT_1000/305x32		12.0	x	1.250	30.00	41.87	14300	591.3	415.9	60.0	15.625	184387	2251.2	186	111.6	114.0	118.9	121.3	128.6	133.5	140.8
WT_1000/406x25		16.0	x	1.000	32.00	41.37	15065	630.4	788.6	85.3	10.667	345361	2400.2	244	118.4	120.8	125.7	128.1	135.4	140.3	147.5
WT_1000/356x32		14.0	x	1.250	35.00	41.87	16684	689.8	660.4	81.7	18.229	292799	2626.4	217	128.6	131.0	135.9	138.3	145.6	150.5	157.7
WT_1000/406x32		16.0	x		40.00	41.87	19067	788.4	985.8	106.7	20.833	437065	3001.6	248	145.6	148.0	152.8	155.3	162.6	167.4	174.7
WT_1000/450x32		17.7	x		44.29	41.87	21113	873.0	1338.3	130.8	23.068	593366	3323.6	275	160.1	162.6	167.4	169.9	177.1	182.0	189.3

Depth	Factored Shear Resistance V _r (kip)						
	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
39	37.0	50.1	78.1	92.4	137.5	168.1	206.9



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h_w in	Flange		Area A in^2	Overall Depth d in	Strong Axis		Weak Axis		Torsion J in^4	Warping C_w in^6	Moment Resistance		Mass							
		Width b_f in	Thickness t_f in			I_x in^4	S_x in^3	I_y in^4	S_y in^3			M_r kip ft	L_u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_1219/127x6	48.0	5.0	x	0.250	2.50	48.50	1681	60.0	6.0	2.1	0.052	3764	228.4	74	20.3	23.3	29.2	32.2	41.1	47.0	55.9
WT_1219/152x6		6.0	x		2.69	48.50	1809	64.6	7.5	2.4	0.056	4694	245.9	79	22.0	25.0	30.9	33.9	42.8	48.7	57.6
WT_1219/152x8		6.0	x	0.313	3.75	48.63	2528	90.0	13.0	3.8	0.122	8151	342.7	89	24.6	27.5	33.5	36.4	45.3	51.2	60.1
WT_1219/152x10		6.0	x	0.375	4.50	48.75	3041	108.0	15.6	4.5	0.211	9807	411.2	89	27.1	30.1	36.0	39.0	47.9	53.8	62.7
WT_1219/178x10		7.0	x		5.25	48.75	3548	126.0	24.8	6.1	0.246	15573	479.8	104	29.7	32.6	38.6	41.5	50.4	56.3	65.2
WT_1219/152x13		6.0	x	0.500	6.00	49.00	4076	144.0	20.8	6.0	0.500	13143	548.3	89	32.2	35.2	41.1	44.1	53.0	58.9	67.8
WT_1219/178x13		7.0	x		7.00	49.00	4756	168.0	33.0	8.2	0.583	20871	639.7	104	35.6	38.6	44.5	47.5	56.4	62.3	71.2
WT_1219/203x13		8.0	x		8.00	49.00	5435	192.0	49.3	10.7	0.667	31154	731.1	119	39.0	42.0	47.9	50.9	59.8	65.7	74.6
WT_1219/152x19		6.0	x	0.750	9.00	49.50	6178	216.1	31.2	9.0	1.688	19919	822.6	90	42.4	45.4	51.3	54.3	63.2	69.1	78.0
WT_1219/203x16		8.0	x	0.625	10.00	49.25	6829	240.1	61.6	13.3	1.302	39144	913.9	119	45.8	48.8	54.7	57.7	66.5	72.5	81.4
WT_1219/203x19		8.0	x	0.750	12.00	49.50	8237	288.1	73.9	16.0	2.250	47214	1096.8	120	52.6	55.6	61.5	64.5	73.3	79.3	88.1
WT_1219/254x19		10.0	x		15.00	49.50	10296	360.1	144.4	25.0	2.813	92216	1371.0	150	62.8	65.7	71.7	74.6	83.5	89.5	98.3
WT_1219/203x25		8.0	x	1.000	16.00	50.00	11096	384.2	98.6	21.3	5.333	63600	1462.8	121	66.2	69.1	75.1	78.0	86.9	92.9	101.7
WT_1219/254x25		10.0	x		20.00	50.00	13871	480.3	192.5	33.3	6.667	124219	1828.5	151	79.8	82.7	88.7	91.6	100.5	106.4	115.3
WT_1219/279x25		11.0	x		22.00	50.00	15258	528.3	256.3	40.3	7.333	165335	2011.3	166	86.6	89.5	95.4	98.4	107.3	113.2	122.1
WT_1219/305x25		12.0	x		24.00	50.00	16645	576.3	332.7	48.0	8.000	214650	2194.2	181	93.4	96.3	102.2	105.2	114.1	120.0	128.9
WT_1219/254x32		10.0	x	1.250	25.00	50.50	17517	600.5	240.7	41.7	13.021	156862	2286.3	153	96.8	99.7	105.6	108.6	117.5	123.4	132.3
WT_1219/330x25		13.0	x	1.000	26.00	50.00	18032	624.3	423.0	56.3	8.667	272908	2377.0	197	100.2	103.1	109.0	112.0	120.9	126.8	135.7
WT_1219/356x25		14.0	x		28.00	50.00	19419	672.4	528.3	65.3	9.333	340856	2559.9	212	106.9	109.9	115.8	118.8	127.7	133.6	142.5
WT_1219/305x32		12.0	x	1.250	30.00	50.50	21020	720.6	415.9	60.0	15.625	271057	2743.6	183	113.7	116.7	122.6	125.6	134.5	140.4	149.3
WT_1219/406x25		16.0	x	1.000	32.00	50.00	22193	768.4	788.6	85.3	10.667	508799	2925.6	242	120.5	123.5	129.4	132.4	141.3	147.2	156.1
WT_1219/356x32		14.0	x	1.250	35.00	50.50	24524	840.7	660.4	81.7	18.229	430429	3200.8	214	130.7	133.7	139.6	142.6	151.4	157.4	166.3
WT_1219/406x32		16.0	x		40.00	50.50	28027	960.8	985.8	106.7	20.833	642506	3658.1	245	147.7	150.6	156.6	159.5	168.4	174.4	183.2
WT_1219/450x32		17.7	x		44.29	50.50	31034	1063.9	1338.3	130.8	23.068	872275	4050.5	271	162.3	165.2	171.1	174.1	183.0	188.9	197.8

Factored Shear Resistance V_r (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
48	44.6	60.5	94.6	112.1	167.1	204.9	249.7



Table 3.2b
(imperial)



SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h _w in	Flange			Area in ²	Overall Depth d in	Section Properties						Moment Resistance		Mass						
		Width b _f in	Thickness t _f in	Strong Axis I _x in ⁴			S _x in ³	Weak Axis		Torsion J in ⁴	Warping C _w in ⁶	M _r kip ft	L _u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
								I _y in ⁴	S _y in ³												
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u
WT_1500/127x6	59.1	5.0	x	0.250	2.50	59.56	2539	73.8	6.0	2.1	0.052	5686	281.1	74	23.1	26.7	34.0	37.7	48.6	55.9	66.8
WT_1500/152x6		6.0	x		2.69	59.56	2733	79.5	7.5	2.4	0.056	7091	302.5	79	24.8	28.4	35.7	39.4	50.3	57.6	68.5
WT_1500/152x8		6.0	x	0.313	3.75	59.68	3817	110.7	13.0	3.8	0.122	12308	421.6	89	27.3	31.0	38.2	41.9	52.8	60.1	71.0
WT_1500/152x10		6.0	x	0.375	4.50	59.81	4590	132.9	15.6	4.5	0.211	14801	505.9	89	29.9	33.5	40.8	44.4	55.4	62.7	73.6
WT_1500/178x10		7.0	x		5.25	59.81	5355	155.0	24.8	6.1	0.246	23504	590.2	104	32.4	36.0	43.3	47.0	57.9	65.2	76.1
WT_1500/152x13		6.0	x	0.500	6.00	60.06	6146	177.2	20.8	6.0	0.500	19818	674.6	89	35.0	38.6	45.9	49.5	60.5	67.8	78.7
WT_1500/178x13		7.0	x		7.00	60.06	7171	206.7	33.0	8.2	0.583	31470	787.0	104	38.4	42.0	49.3	52.9	63.9	71.2	82.1
WT_1500/203x13		8.0	x		8.00	60.06	8195	236.2	49.3	10.7	0.667	46976	899.4	119	41.8	45.4	52.7	56.3	67.3	74.6	85.5
WT_1500/152x19		6.0	x	0.750	9.00	60.56	9297	265.8	31.2	9.0	1.688	29977	1012.0	89	45.1	48.8	56.1	59.7	70.7	77.9	88.9
WT_1500/203x16		8.0	x	0.625	10.00	60.31	10287	295.3	61.6	13.3	1.302	58966	1124.4	119	48.5	52.2	59.5	63.1	74.1	81.3	92.3
WT_1500/203x19		8.0	x	0.750	12.00	60.56	12396	354.4	73.9	16.0	2.250	71056	1349.3	119	55.3	59.0	66.3	69.9	80.8	88.1	99.1
WT_1500/254x19		10.0	x		15.00	60.56	15495	443.0	144.4	25.0	2.813	138782	1686.6	149	65.5	69.2	76.5	80.1	91.0	98.3	109.3
WT_1500/203x25		8.0	x	1.000	16.00	61.06	16668	472.6	98.6	21.3	5.333	95535	1799.4	120	68.9	72.6	79.8	83.5	94.4	101.7	112.6
WT_1500/254x25		10.0	x		20.00	61.06	20834	590.8	192.5	33.3	6.667	186593	2249.2	150	82.5	86.1	93.4	97.1	108.0	115.3	126.2
WT_1500/279x25		11.0	x		22.00	61.06	22918	649.8	256.3	40.3	7.333	248355	2474.1	165	89.3	92.9	100.2	103.9	114.8	122.1	133.0
WT_1500/305x25		12.0	x		24.00	61.06	25001	708.9	332.7	48.0	8.000	322432	2699.0	180	96.1	99.7	107.0	110.7	121.6	128.9	139.8
WT_1500/254x32		10.0	x	1.250	25.00	61.56	26262	738.6	240.7	41.7	13.021	235187	2812.1	151	99.5	103.1	110.4	114.1	125.0	132.3	143.2
WT_1500/330x25		13.0	x	1.000	26.00	61.06	27085	768.0	423.0	56.3	8.667	409944	2924.0	195	102.9	106.5	113.8	117.5	128.4	135.7	146.6
WT_1500/356x25		14.0	x		28.00	61.06	29168	827.1	528.3	65.3	9.333	512010	3148.9	210	109.7	113.3	120.6	124.3	135.2	142.5	153.4
WT_1500/305x32		12.0	x	1.250	30.00	61.56	31514	886.3	415.9	60.0	15.625	406403	3374.5	182	116.5	120.1	127.4	131.0	142.0	149.3	160.2
WT_1500/406x25		16.0	x	1.000	32.00	61.06	33335	945.2	788.6	85.3	10.667	764284	3598.7	241	123.3	126.9	134.2	137.8	148.8	156.1	167.0
WT_1500/356x32		14.0	x	1.250	35.00	61.56	36766	1034.1	660.4	81.7	18.229	645353	3936.9	212	133.4	137.1	144.4	148.0	159.0	166.2	177.2
WT_1500/406x32		16.0	x		40.00	61.56	42019	1181.8	985.8	106.7	20.833	963325	4499.3	242	150.4	154.1	161.4	165.0	175.9	183.2	194.2
WT_1500/450x32		17.7	x		44.29	61.56	46526	1308.6	1338.3	130.8	23.068	1307824	4982.0	268	165.0	168.6	175.9	179.6	190.5	197.8	208.7

Factored Shear Resistance V _r (kip)							
Depth	WTO	WTA	WTB	WTC	WTF	WTH	WTK
aa	bb	cc	dd	ee	ff	gg	hh
59	46.0	65.2	97.4	129.9	168.5	193.1	228.5





SIN Beam Bending Properties

Imperial

SIN Size	Depth of Web h _w in	Flange			Overall Depth d in	Section Properties						Moment Resistance		Mass							
		Width b _f in	Thickness t _f in	Area in ²		Strong Axis		Weak Axis		Torsion J in ⁴	Warping C _w in ⁶	M _r kip ft	L _u in	WTO lb / ft	WTA lb / ft	WTB lb / ft	WTC lb / ft	WTF lb / ft	WTH lb / ft	WTK lb / ft	
						I _x in ⁴	S _x in ³	I _y in ⁴	S _y in ³												
-	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u

Notes

- SIN Beam sizes are indicated as WT[WEB THICKNESS] [WEB DEPTH] / [FLANGE WIDTH] x [FLANGE THICKNESS] - [WEIGHT]
SIN Beam sizes are always indicated in Metric units
i.e. For a 36in x 12ga web with 10in x 5/8in Flanges and a Weight of 58 lb/ft the designation is WTB915 / 254x16 - 86.5
- Flanges and Webs are all fabricated from W350 Material (F_y = 350MPa)
- Flanges of over 5/8in (16mm) in thickness will include a premium due to the required splicing of the flat bar
- ** 152x6 Section Properties and Moment resistance based on a flange width of 136mm to be Class 3

- a Depth of the Beam web, i.e. Inside of flanges
- b Width of top and bottom flange
- d Thickness of top and bottom flange
- e Cross sectional area of flanges only (web is neglected)
- f Overall depth of section
- g Strong Axis Moment of Inertia computed using flange properties only
- h Strong Axis Section Modulus computed using flange properties only
- i Weak Axis Moment of Inertia computed using flange properties only
- j Weak Axis Section Modulus computed using flange properties only
- k Torsional Constant J computed using flange properties only
- l Warping Constant C_w - computed using flange properties only
- m Strong Axis Factored Moment Resistance assuming compression flange is fully braced based on CSA S16-09
- n Maximum unbraced length for which M_r is applicable
- o - u Mass of member per unit length with a web thickness of 16ga (1.519mm); 14ga (1.897mm); 12ga; 11ga; 8ga; 6ga; 3ga

- aa Depth of Beam web
- bb - hh Shear Capacity for a 16 ga (1.519mm); 14ga; 12ga; 11ga; 8ga; 6ga; 3ga web

