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Table 1 - Dimensions of LSB Sections

LSB Designation						Flange Depth
d	x	b _f	x	t		
mm		mm		mm		mm
300	x	75	x	3.0	LSB	25.0
300	x	75	x	2.5	LSB	25.0
300	x	60	x	2.0	LSB	20.0
250	x	75	x	3.0	LSB	25.0
250	x	75	x	2.5	LSB	25.0
250	x	60	x	2.0	LSB	20.0
200	x	60	x	2.5	LSB	20.0
200	x	60	x	2.0	LSB	20.0
200	x	45	x	1.6	LSB	15.0
150	x	45	x	2.0	LSB	15.0
150	x	45	x	1.6	LSB	15.0
125	x	45	x	2.0	LSB	15.0
125	x	45	x	1.6	LSB	15.0

**Table 2 – Elastic Lateral Buckling Moments of Cantilever LSBs
Subjected to a Point Load at the Free End (PL)**

LSB d x b _f x t (mm)	Span (mm)	FEA Buckling Moment (M _{od-non})		α_m Factor	Current α_m Factors		
		(kNm)	Mode		AS4100 Table 5.6.2	AISC	BS5950
							L _e = 0.8L
125 x 45 x 2.0 LSB	750	57.35	<i>nLB*</i>	-	1.25	1.00	1.39
	1000	48.72	LDB	1.96	1.25	1.00	1.27
	1500	31.10	LDB*	1.74	1.25	1.00	1.19
	2500	18.01	LDB*	1.50	1.25	1.00	1.21
	4000	11.18	LTB	1.40	1.25	1.00	1.24
250 x 60 x 2.0 LSB	1500	54.65	<i>nLB</i>	-	1.25	1.00	1.42
	2000	56.69	<i>nLB</i>	-	1.25	1.00	1.31
	2500	50.23	LDB	1.95	1.25	1.00	1.23
	3000	41.14	LDB*	1.84	1.25	1.00	1.19
	4000	30.12	LDB*	1.66	1.25	1.00	1.17
	6000	19.87	LTB	1.49	1.25	1.00	1.20
300 x 75 x 3.0 LSB	1500	158.58	<i>nLB*</i>	-	1.25	1.00	1.46
	2500	149.46	LDB	1.94	1.25	1.00	1.27
	3000	123.29	LDB*	1.88	1.25	1.00	1.22
	4000	88.83	LDB*	1.70	1.25	1.00	1.19
	6000	57.31	LTB	1.52	1.25	1.00	1.20

*LDB** Lateral distortional buckling mode with negligible web distortion

nLB Non-lateral buckling mode (local buckling near the support) that precedes LDB

*nLB** Non-lateral buckling mode (web local buckling at the load position) that precedes LDB

**Table 3 – Elastic Lateral Buckling Moments of Cantilever LSBs
Subjected to a Uniformly Distributed Load (UDL)**

LSB d x b _f x t (mm)	Span (mm)	FEA Buckling Moment (M _{od-non})		α_m Factor	Current α_m Factors		
		(kNm)	Mode		AS4100 Table 5.6.2	AISC	BS5950
							L _e = 0.8L
125 x 45 x 2.0 LSB	750	58.90	<i>nLB</i>	-	2.25	1.00	1.39
	1000	64.32	<i>nLB</i>	-	2.25	1.00	1.27
	1500	51.96	LDB*	2.91	2.25	1.00	1.19
	2500	29.53	LDB*	2.46	2.25	1.00	1.19
	4000	17.92	LTB	2.24	2.25	1.00	1.24
250 x 60 x 2.0 LSB	2500	54.50	<i>nLB</i>	-	2.25	1.00	1.23
	3000	55.85	<i>nLB</i>	-	2.25	1.00	1.19
	4000	50.16	LDB*	2.76	2.25	1.00	1.17
	6000	32.58	LTB	2.44	2.25	1.00	1.20
300 x 75 x 3.0 LSB	2500	175.31	<i>nLB</i>	-	2.25	1.00	1.27
	3000	183.01	<i>nLB</i>	-	2.25	1.00	1.22
	4000	150.05	LDB*	2.88	2.25	1.00	1.19
	6000	95.90	LTB	2.54	2.25	1.00	1.20

*LDB** Lateral distortional buckling mode with negligible web distortion

nLB Non-lateral buckling mode (local buckling near the support) that precedes LDB

Table 4 – Elastic Lateral Buckling Moments of Cantilever LSBs Subjected to Top Flange (TF) and Bottom Flange (BF) Loading

LSB d x b _f x t (mm)	Span (mm)	for TF case (kNm)				for BF case (kNm)			
		PL	Mode	UDL	Mode	PL	Mode	UDL	Mode
125 x 45 x 2.0 LSB	750	21.81	LDB ⁺	43.75	LDB	-	<i>nLB</i>	-	<i>nLB</i>
	1000	24.29	LDB	47.59	LDB	53.47	LDB	-	<i>nLB</i>
	1500	24.85	LDB	40.47	LDB	32.81	LDB*	60.92	LDB*
	2500	16.58	LDB*	25.96	LDB*	18.84	LDB*	32.66	LDB*
	4000	10.61	LTB	16.61	LTB	11.53	LTB	19.20	LTB
250 x 60 x 2.0 LSB	1500	-	<i>nLB</i> *	-	<i>nLB</i>	-	<i>nLB</i>	-	<i>nLB</i>
	2000	25.99	LDB ⁺	-	<i>nLB</i>	-	<i>nLB</i>	-	<i>nLB</i>
	2500	28.70	LDB	53.69	LDB	54.10	LDB	-	<i>nLB</i>
	3000	29.73	LDB	51.03	LDB	43.45	LDB*	-	<i>nLB</i>
	4000	26.26	LDB*	41.40	LDB*	31.52	LDB*	57.28	LDB*
	6000	18.42	LTB	28.89	LTB	20.65	LTB	35.55	LTB
300 x 75 x 3.0 LSB	1500	-	<i>nLB</i> *	123.69	LDB ⁺	-	<i>nLB</i>	-	<i>nLB</i>
	2500	74.07	LDB	144.23	LDB	167.60	LDB	-	<i>nLB</i>
	3000	77.36	LDB	139.70	LDB	132.84	LDB*	-	<i>nLB</i>
	4000	72.55	LDB*	117.12	LDB*	94.18	LDB*	175.97	LDB*
	6000	52.14	LTB	82.40	LTB	60.22	LTB	106.70	LTB

*LDB** Lateral distortional buckling mode with negligible web distortion

nLB Non-lateral buckling mode (local buckling near the support) that precedes LDB

*nLB** Non-lateral buckling mode (local web buckling at the load position) that precedes LDB

LDB⁺ Lateral distortional buckling mode with interaction (*nLB* or *nLB**)