	PROJECT:	JOB NO.	17404
	APEX BUILDING PRODUCTS	Date	17-Nov-14
	SUBJECT TOPHAT FLOOR JOISTS	Sheet	

Suite 5 Global Innovation Building, 2 Enterprise Grove, Mt Helen 3350

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SPAN TABLES FOR INDUSTRIAL APPLICATIONS WHERE VIBRATION CONTROL IS NOT REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Floor Live Load - 1.5 kPa

Section	Max Span				Deflection Limit		L/500	
	Spacing 450mm		Spacing 600mm		L/500			
	Single Span	Double Span	Single Span	Double Span	Single Span	Double Span		
50/.75	1297	5	1735	3	1178	4	1576	2
50/0.95	1472	5	1969	3	1337	4	1789	2
64/.75	1578	5	2112	3	1434	4	1919	2
64/.95	1708	5	2285	3	1552	4	2076	2
64/1.15	1820	5	2435	3	1654	4	2212	2
75/.75	1796	5	2403	3	1632	4	2183	2
75/.95	1953	5	2613	3	1774	4	2374	2
96/.75	2194	5	2936	3	1993	4	2667	2
96/.95	2386	5	3192	3	2168	4	2900	2
96/1.15	2589	5	3464	3	2352	4	3147	2
120/.75	2818	5	3770	3	2560	4	3425	2
120/.95	3064	5	4099	3	2784	4	3725	2
120/1.15	3325	5	4448	3	3021	4	4042	2

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SPAN TABLES FOR INDUSTRIAL APPLICATIONS WHERE VIBRATION CONTROL IS NOT REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Section	Max Span				Deflection Ratio L/500	
	Spacing 450mm				Spacing 600mm	
	Single Span		Double Span		Single Span	Double Span
50/.75	1178	4	1576	2	1070	1432
50/0.95	1215	3	1626	2	1215	1626
64/.75	1434	4	1919	2	1303	1743
64/.95	1552	4	2076	2	1410	1886
64/1.15	1654	4	2212	2	1502	2010
75/.75	1632	4	2183	2	1483	1984
75/.95	1774	4	2374	2	1612	2157
96/.75	1993	4	2667	2	1811	2423
96/.95	2168	4	2900	2	1969	2635
96/1.15	2352	4	3147	2	2137	2859
120/.75	2560	4	3425	2	2326	3112
120/.95	2784	4	3725	2	2529	3384
120/1.15	3021	4	4042	2	2745	3672

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SPAN TABLES FOR INDUSTRIAL APPLICATIONS WHERE VIBRATION CONTROL IS NOT REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Floor Live Load - 3.0 kPa

Section	Max Span		Deflection Ratio L/500	
	Spacing 450mm		Spacing 600mm	
	Single Span	Double Span	Single Span	Double Span
50/.75	1029	1377	935	1251
50/0.95	1168	1563	1061	1420
64/.75	1253	1676	1138	1523
64/.95	1355	1813	1231	1648
64/1.15	1444	1933	1312	1756
75/.75	1425	1907	1295	1733
75/.95	1550	2074	1408	1884
96/.75	1741	2330	1582	2117
96/.95	1894	2534	1720	2302
96/1.15	2055	2749	1867	2498
120/.75	2236	2992	2032	2719
120/.95	2432	3254	2209	2956
120/1.15	2639	3531	2398	3208

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SPAN TABLES FOR INDUSTRIAL APPLICATIONS WHERE VIBRATION CONTROL IS NOT REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Floor Live Load - 5.0 kPa

Section	Max Span		Deflection Ratio L/500	
	Spacing 450mm		Spacing 600mm	
	Single Span	Double Span	Single Span	Double Span
50/.75	868	1161	789	1055
50/0.95	985	1318	895	1198
64/.75	1057	1414	960	1284
64/.95	1143	1530	1039	1390
64/1.15	1218	1630	1107	1481
75/.75	1202	1609	1092	1462
75/.95	1307	1749	1188	1589
96/.75	1469	1965	1334	1786
96/.95	1597	2137	1451	1942
96/1.15	1733	2319	1575	2107
120/.75	1886	2524	1714	2293
120/.95	2051	2744	1864	2493
120/1.15	2226	2978	2022	2706

The above table is applicable to top Hat Sections Manufactured by Milform Products

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SPAN TABLES FOR DOMESTIC AND COMMERCIAL APPLICATIONS AND WHERE VIBRATION CONTROL IS REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Section	Max Span				Deflection Limit L/500 or 2mm for 1kN
	Spacing 450mm		Spacing 600mm		
	Single Span	Double Span	Single Span	Double Span	
50/.75	972	1735	1178	1576	
50/0.95	1103	1969	1337	1789	
64/.75	1183	2112	1434	1919	
64/.95	1280	2285	1552	2076	
64/1.15	1364	2435	1654	2212	
75/.75	1346	2403	1632	2183	
75/.95	1464	2613	1774	2374	
96/.75	1644	2936	1993	2667	
96/.95	1788	3192	2168	2900	
96/1.15	1940	3464	2352	3147	
120/.75	2112	3770	2560	3425	
120/.95	2296	4099	2784	3725	
120/1.15	2492	4448	3021	4042	

	PROJECT:	APEX BUILDING PRODUCTS	JOB NO.	17404
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SPAN TABLES FOR DOMESTIC AND COMMERCIAL APPLICATIONS AND WHERE VIBRATION CONTROL IS REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Section	Deflection Ratio L/500			
	Floor Live Load - 2.0 kPa		Max Span	
	Max Span		Max Span	
	Spacing 450mm		Spacing 600mm	
	Single Span	Double Span	Single Span	Double Span
50/.75	972	1576	1070	1432
50/0.95	1103	1626	1215	1626
64/.75	1183	1919	1303	1743
64/.95	1280	2076	1410	1886
64/1.15	1364	2212	1502	2010
75/.75	1346	2183	1483	1984
75/.95	1464	2374	1612	2157
96/.75	1644	2667	1811	2423
96/.95	1788	2900	1969	2635
96/1.15	1940	3147	2137	2859
120/.75	2112	3425	2326	3112
120/.95	2296	3725	2529	3384
120/1.15	2492	4042	2745	3672

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SPAN TABLES FOR DOMESTIC AND COMMERCIAL APPLICATIONS AND WHERE VIBRATION CONTROL IS REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Section	Max Span		Deflection Ratio L/500	
	Spacing 450mm		Spacing 600mm	
	Single Span	Double Span	Single Span	Double Span
50/.75	972	1377	935	1251
50/0.95	1103	1563	1061	1420
64/.75	1183	1676	1138	1523
64/.95	1280	1813	1231	1648
64/1.15	1364	1933	1312	1756
75/.75	1346	1907	1295	1733
75/.95	1464	2074	1408	1884
96/.75	1644	2330	1582	2117
96/.95	1788	2534	1720	2302
96/1.15	1940	2749	1867	2498
120/.75	2112	2992	2032	2719
120/.95	2296	3254	2209	2956
120/1.15	2492	3531	2398	3208

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SPAN TABLES FOR DOMESTIC AND COMMERCIAL APPLICATIONS AND WHERE VIBRATION CONTROL IS REQUIRED.

TOP HAT SECTIONS AS FLOOR JOISTS

Max Spans for Strength and Serviceability

Section	Max Span				Deflection Ratio L/500
	Spacing 450mm		Spacing 600mm		
	Single Span	Double Span	Single Span	Double Span	
50/.75	868	1161	789	1055	
50/0.95	985	1318	895	1198	
64/.75	1057	1414	960	1284	
64/.95	1143	1530	1039	1390	
64/1.15	1218	1630	1107	1481	
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96/.95	1597	2137	1451	1942	
96/1.15	1733	2319	1575	2107	
120/.75	1886	2524	1714	2293	
120/.95	2051	2744	1864	2493	
120/1.15	2226	2978	2022	2706	

The above table is applicable to top Hat Sections Manufactured by Milform Products

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TOPHAT SECTIONS

SECTION PROPERTIES FOR DESIGN

Section	Area mm ²	Ixx mm ⁴	Zxx top mm ³	Iyy mm ⁴	Zyy mm ³	J mm ³	Iw mm ⁴	rx mm	ry mm	Yo mm
50075	135.00	47890	1664	101614	1785	25.31	7.628E+08	39.77	18.83	39.77
50 095	181.98	70056	2551	142725	2849	54.75	1.474E+09	40.98	19.62	40.98
64075	155.28	86384	2379	109758	1928	29.12	1.255E+09	51.79	23.59	51.79
64095	196.69	109420	3013	139027	2442	59.17	1.590E+09	51.79	23.59	51.79
64115	238.10	132456	3647	168296	2957	104.96	1.924E+09	51.79	23.59	51.79
75075	164.29	127297	3185	152276	2675	26.83	1.622E+09	64.31	27.84	64.31
75095	211.23	163668	4096	195784	3440	57.03	2.085E+09	64.31	27.84	64.31
96075	194.36	232092	4507	196088	3195	31.75	2.856E+09	83.52	34.56	83.52
96095	249.89	298403	5794	252113	4107	67.47	3.672E+09	83.52	34.56	83.52
96115	319.31	381293	7404	322144	5248	140.76	4.692E+09	83.52	34.56	83.52
120075	<u>255.18</u>	491554	7488	476983	5776	41.68	1.505E+10	102.18	43.89	102.18
120095	328.09	631997	9628	613263	7426	88.58	1.935E+10	102.18	43.89	102.18
120115	419.22	807552	12302	783614	9489	184.81	2.472E+10	102.18	43.89	102.18