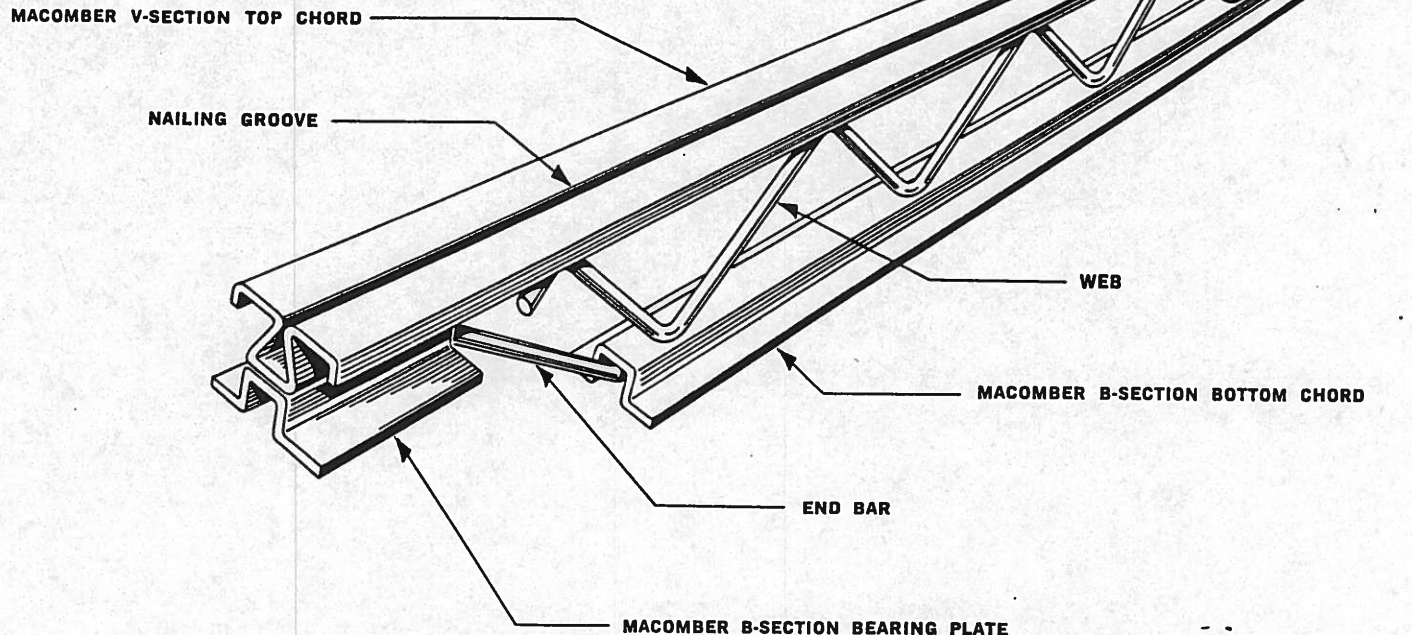


THE MACOMBER V-BEAM



A DEPENDABLE JOIST FROM A RELIABLE MANUFACTURER

The Macomber V-BEAM is the product of more than forty years of leadership in the steel building field. V-BEAMS are engineered to provide you with unexcelled performance and quality. The performance and design of this member is verified by the results of more than a thousand load tests on full size joists, conducted since 1950 in the V-BEAM development sequence. In addition, the success of hundreds of thousands of V-BEAMS on the job lends proof to our claims for this product.

The Macomber V-BEAM is available in depths from 8" to 28" and in spans to 56'. The V-BEAM is made with cold rollformed chords. The Macomber V-Section is utilized as the top chord and a Macomber B-Section serves as the bottom chord, providing the joist with unusual lateral stability. The chords are proportioned in accordance with the latest AISI specifications.

It will be to your advantage to check on the V-BEAM for use in your next project, it's a dependable joist. For information, help, or a quotation on your needs, call or write to the Macomber representative nearest you.

SUGGESTED SPECIFICATION

Steel joists shall be designed to support the live and dead loads shown on the drawings and shall have factor of safety and live load deflections as follows:

Roof Joists

Factor of safety 1.65. Maximum live load deflection $1/360 - 1/240$ or $1/180$ of span.

Floor Joists

Factor of safety 1.65. Maximum live load deflection $1/360$ of span.

See footnotes of V-BEAM load table for limitations on use of this member as floor joist.

The clear span of all joists shall not exceed 550 times the top chord radius of gyration about the vertical axis.

Paint

Joists and accessories shall be painted one shop coat of manufacturer's standard protective paint which can be readily field painted in exposed areas without bleeding through.

Inspection and Test Reports

The joist manufacturer must provide resident inspection of his production by a nationally recognized independent testing laboratory, in addition to the product inspection done by his own forces. The manufacturer must submit, with his approval drawings, representative certified reports by such independent testing laboratory covering tests of his joists, as proof of the performance and quality of workmanship of his products.

If the manufacturer does not have resident testing laboratory inspectors in his plant, he may provide independent testing laboratory inspection of this specific project continuously during manufacture; and make load tests, supervised by that testing laboratory, of one out of every 50 joists (including one joist of each different top chord size and depth) to prove compliance with the safety factor and live load deflection requirements of this specification.

Bridging

Bridging shall be horizontal angles or other shapes, attached to the chords by welding or other mechanical means. The slenderness ratio of the bridging between joists shall not exceed 300. The slenderness ratio of the joist top chord between bridging lines shall not exceed 150. The slenderness ratio of the bottom chord between bridging points shall not exceed 150 for floor joists or 300 for roof joists.

Erection

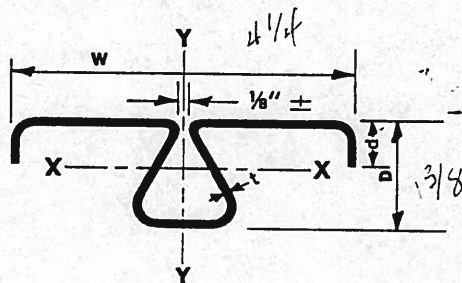
Joists shall be carefully handled to prevent damage. Joists shall be accurately spaced, anchored, and completely bridged prior to the application of construction loads.

DEFLECTIONS

The V-BEAM load table shows maximum live loads for deflection limits of 1/360 and 1/240 of the span. To assist design authorities, who must meet unusual deflection limitations, Macomber has developed and published the most extensive deflection information ever compiled on steel joists. This information may be obtained through your Macomber Representative.

MACOMBER CHORD PROPERTIES

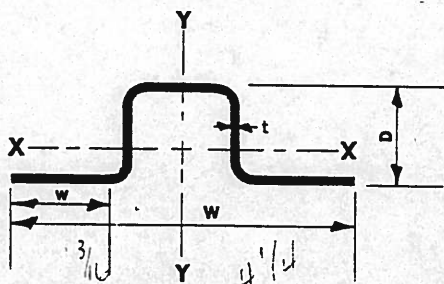
V-SECTION TOP CHORD



DIMENSIONS ARE SUBJECT TO
BLANK-GAGE AND ROLLING TOLERANCE

V-Beam Size	Area In. ²	Gage In.	W In.	d In.	D In.	AXIS X-X			r _y y In.
						I	S	r	
A	0.374	0.057	2 1/16	5/16	1.31	0.08	0.09	0.46	0.70
B	0.454	0.068	2 1/16	5/8	1.32	0.09	0.10	0.46	0.72
C	0.563	0.085	2 1/16	5/8	1.34	0.11	0.13	0.45	0.72
D	0.698	0.098	3 1/2	5/8	1.35	0.14	0.16	0.46	0.87
E	0.833	0.115	3 1/2	1 1/16	1.37	0.16	0.18	0.45	0.90
F	0.921	0.126	3 1/2	3/4	1.38	0.19	0.21	0.45	0.94
G	1.008	0.126	4 5/16	1 1/16	1.38	0.21	0.22	0.45	1.12
H	1.202	0.148	4 5/16	3/4	1.40	0.23	0.24	0.45	1.15
I	1.372	0.139	5 5/16	7/8	1.39	0.25	0.25	0.43	1.60
J	1.705	0.176	5 5/16	7/8	1.43	0.32	0.32	0.43	1.61

B-SECTION BOTTOM CHORD



DIMENSIONS ARE SUBJECT TO
BLANK-GAGE AND ROLLING TOLERANCE

V-Beam Size	Area In. ²	Gage In.	W In.	w In.	D In.	AXIS X-X			r _y y In.
						I	S	r	
A	0.352	0.084	2 1/16	5/8	1.02	0.05	0.09	0.38	0.78
B	0.436	0.099	3 3/16	3/4	1.04	0.06	0.10	0.38	0.83
C	0.542	0.124	3 1/8	1 1/16	1.06	0.08	0.13	0.38	0.82
D	0.654	0.124	4 1/8	1 3/16	1.06	0.09	0.14	0.38	1.06
E	0.778	0.173	3 3/8	3/4	1.11	0.12	0.18	0.39	0.85
F	0.854	0.173	3 3/4	1	1.11	0.13	0.18	0.38	0.96
G	0.929	0.173	4 1/4	1 1/16	1.11	0.13	0.19	0.38	1.08
H	1.054	0.173	4 1/16	1 1/16	1.11	0.14	0.19	0.37	1.27
I	1.240	0.190	5 5/16	1 3/4	1.13	0.16	0.21	0.37	1.43
J	1.623	0.223	6 1/16	2 1/8	1.16	0.21	0.25	0.36	1.64

V-BEAM DIMENSIONS AND PROPERTIES

Designation Number	Nominal Depth (in.)	I of Chords (in. ⁴)	End Panel Length		Interior Panel Length	Bearing Plate		Standard End Bearing Depth (in.)
			Minimum	Maximum		Width (in.)	Thickness (in.)	
8A	8	9.5	2'-0"	2'-10"	2'-0"	4½	⅝	2½
10A	10	15.5	2'-0"	2'-10"	2'-0"	4½	⅝	2½
12A	12	22.8	2'-0"	2'-10"	2'-0"	4½	⅝	2½
8B	8	11.7	2'-0"	2'-10"	2'-0"	4½	⅝	2½
10B	10	19.0	2'-0"	2'-10"	2'-0"	4½	⅝	2½
12B	12	28.1	2'-0"	2'-10"	2'-0"	4½	⅝	2½
14B	14	39.0	2'-0"	2'-10"	2'-0"	4½	⅝	2½
16B	16	51.6	2'-0"	2'-10"	2'-0"	4½	⅝	2½
10C	10	23.7	2'-0"	2'-10"	2'-0"	4½	⅝	2½
12C	12	35.0	2'-0"	2'-10"	2'-0"	4½	⅝	2½
14C	14	48.5	2'-0"	2'-10"	2'-0"	4½	⅝	2½
16C	16	64.2	2'-0"	2'-10"	2'-0"	4½	⅝	2½
18C	18	82.1	2'-0"	2'-10"	2'-0"	4½	⅝	2½
10D	10	29.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
12D	12	43.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
14D	14	60.2	2'-0"	2'-10"	2'-0"	6	⅝	2½
16D	16	79.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
18D	18	101.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
20D	20	126.4	2'-0"	2'-10"	2'-0"	6	⅝	2½
22D	22	153.9	2'-0"	2'-10"	2'-0"	6	⅝	2½
24D	24	184.0	2'-0"	2'-10"	2'-0"	6	⅝	2½
26D	26	216.9	2'-0"	2'-10"	2'-0"	6	⅝	2½
28D	28	252.4	2'-0"	2'-10"	2'-0"	6	⅝	2½
12E	12	51.7	2'-0"	2'-10"	2'-0"	6	⅝	2½
14E	14	71.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
16E	16	94.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
18E	18	120.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
20E	20	150.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
22E	22	183.0	2'-0"	2'-10"	2'-0"	6	⅝	2½
24E	24	218.9	2'-0"	2'-10"	2'-0"	6	⅝	2½
26E	26	258.0	2'-0"	2'-10"	2'-0"	6	⅝	2½
28E	28	300.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
12F	12	57.4	2'-0"	2'-10"	2'-0"	6	⅝	2½
14F	14	79.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
16F	16	104.7	2'-0"	2'-10"	2'-0"	6	⅝	2½
18F	18	133.7	2'-0"	2'-10"	2'-0"	6	⅝	2½
20F	20	166.2	2'-0"	2'-10"	2'-0"	6	⅝	2½
22F	22	202.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
24F	24	241.9	2'-0"	2'-10"	2'-0"	6	⅝	2½
26F	26	285.1	2'-0"	2'-10"	2'-0"	6	⅝	2½
28F	28	331.8	2'-0"	2'-10"	2'-0"	6	⅝	2½
14G	14	87.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
16G	16	115.1	2'-0"	2'-10"	2'-0"	6	⅝	2½
18G	18	146.9	2'-0"	2'-10"	2'-0"	6	⅝	2½
20G	20	182.5	2'-0"	2'-10"	2'-0"	6	⅝	2½
22G	22	222.0	2'-0"	2'-10"	2'-0"	6	⅝	2½
24G	24	265.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
26G	26	312.5	2'-0"	2'-10"	2'-0"	6	⅝	2½
28G	28	363.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
16H	16	134.2	2'-0"	2'-10"	2'-0"	6	⅝	2½
18H	18	171.2	2'-0"	2'-10"	2'-0"	6	⅝	2½
20H	20	212.6	2'-0"	2'-10"	2'-0"	6	⅝	2½
22H	22	258.5	2'-0"	2'-10"	2'-0"	6	⅝	2½
24H	24	308.9	2'-0"	2'-10"	2'-0"	6	⅝	2½
26H	26	363.8	2'-0"	2'-10"	2'-0"	6	⅝	2½
28H	28	423.2	2'-0"	2'-10"	2'-0"	6	⅝	2½
16I	16	157.1	2'-0"	2'-10"	2'-0"	6	⅝	2½
18I	18	200.1	2'-0"	2'-10"	2'-0"	6	⅝	2½
20I	20	248.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
22I	22	301.8	2'-0"	2'-10"	2'-0"	6	⅝	2½
24I	24	360.4	2'-0"	2'-10"	2'-0"	6	⅝	2½
26I	26	424.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
28I	28	493.3	2'-0"	2'-10"	2'-0"	6	⅝	2½
20J	20	319.5	2'-0"	2'-10"	2'-0"	6	⅝	2½
22J	22	388.0	2'-0"	2'-10"	2'-0"	6	⅝	2½
24J	24	463.2	2'-0"	2'-10"	2'-0"	6	⅝	2½
26J	26	544.9	2'-0"	2'-10"	2'-0"	6	⅝	2½
28J	28	633.4	2'-0"	2'-10"	2'-0"	6	⅝	2½

V-BEAM DESIGN

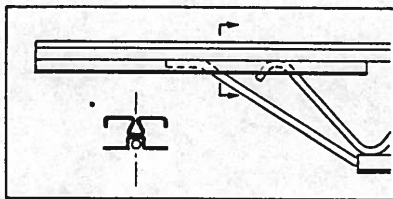
With this, the latest in the series of V-BEAMS, Macomber continues its leadership in the steel building field. This member embodies the experience gained since 1950 when Macomber introduced the original V-BEAM to the market. Development of the V-BEAM is based on information from the great number of tests performed on full sized members, since that date.

The V-BEAM top chord, consisting of the V-Section, has been in constant use on all Macomber products since 1946. Test data and engineering information on this section support its usage. The B-Section making up the bottom chord has been in use since 1960 in the Macomber "S" series joists, and more recently in the J & H series joists. The information gathered justifies its use in the V-BEAM.

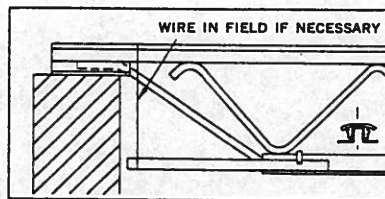
The components of the V-BEAM — chords, bearing plates, end bars and web system — lend themselves admirably to modern fabricating standards and Macomber's up-to-date fabricating facilities.

In preparing the load tables, it was recognized that under some conditions, the deflection of a member governs its design. To simplify the selection of V-BEAMS under these conditions, additional loads, in color, have been incorporated listing the live load carrying capacities for each joist size and span, for limiting deflections of $1/360$ and $1/240$ of the span.

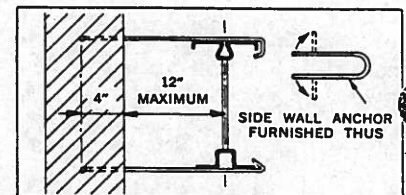
V-BEAM CONSTRUCTION DETAILS



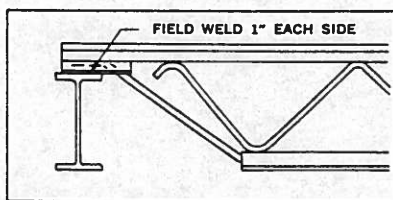
EXTENDED END



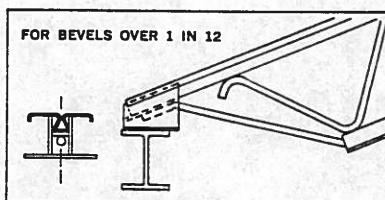
CEILING EXTENSION



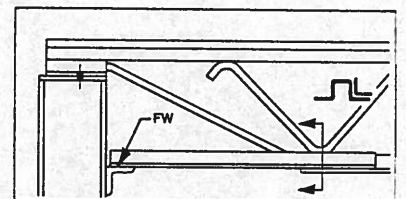
SIDE WALL ANCHORAGE



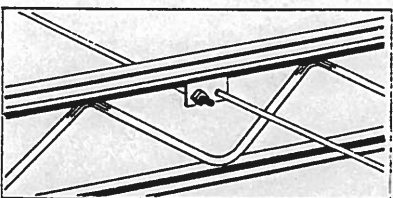
WELDED END CONNECTION



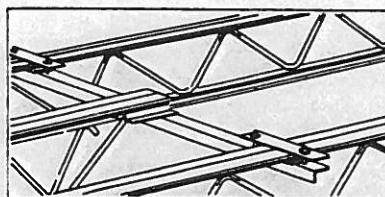
SLOPED BEARING PLATE



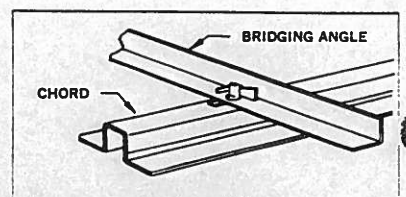
COLUMN TIE



SAG ROD BRIDGING



HEADER ANGLE FRAMING SMALL OPENINGS



WEDGE TYPE BRIDGING DETAIL

MACOMBER V-BEAM LOAD TABLE (Continued)

Allowable Total Loads in Pounds per Lineal Foot. Factor of Safety = 1.65.

Size	Nom. Depth (In.)	Resist. Moment (In.-K.)	Max. End Reaction (Lbs.)	CLEAR SPAN IN FEET																																								Size
				20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44																
18C	18	276.12	3642	364	346 322	331 280	316 245	303 216	291 191 287	272 170 255	252 151 227	234 136 204	218 122 183	204 110 166	191 100 150	179 91 136																											18C	
18D	18	343.39	5161	516 462	491 399	469 347	432 304	397 267	366 236 355	338 210 315	314 187 281	292 168 252	272 151 227	254 137 205	238 124 186	223 112 169	210 102 154	198 94 141	186 86 129	176 79 118																								18D
18E	18	408.06	4949	494	471	449 413	430 361	412 318	395 281	380 250 375	366 223 335	346 200 300	323 180 270	302 162 244	283 147 221	265 134 201	249 122 183	235 111 167	222 102 153	209 94 141																								18E
18F	18	448.96	6707	670 608	638 525	609 457	565 400	519 352	478 311 467	442 277 415	410 247 371	381 221 332	355 199 299	332 180 270	311 163 245	292 148 222	274 135 203	258 123 185	244 113 170	230 104 156																								18F
18G	18	490.06	6553					546 387	522 342 513	483 304 456	448 271 407	416 243 365	388 219 329	363 198 297	339 179 269	319 163 244	300 148 223	282 136 204	266 124 187	252 114 172																								18G
18H	18	556.96	6386					532 451	510 399	491 354	473 316	456 284 426	440 255 383	412 230 346	386 209 313	362 190 285	340 173 260	321 158 237	303 145 218	286 133 200																								18H
18I	18	657.93	6963					580 527	557 466	535 414	515 370	497 331	480 298 448	464 269 404	449 244 366	428 222 333	402 202 304	379 185 278	358 169 254	338 156 234																								18I
20D	20	383.03	4626	462	440	420	402 378	385 333	370 294	355 261	342 233	325 209 314	303 188 283	283 170 255	265 154 231	249 128 210	234 117 192	220 108 175	197 98 161	186 90 148	176 83 136																							20D
20E	20	455.21	5828	582	555	529 514	506 449	485 395	466 350	448 311	416 278	387 249	360 224	337 202	315 183	296 167	278 152	262 139	247 127	234 117	221 108	210 99	199 92	189 85																			20E	
20F	20	500.72	6202	620	590	563	539 497	516 437	496 387	477 344	457 307	425 275 413	396 248	370 224	347 203	325 184	306 168	288 154	272 141	257 129	243 119	231 110	219 102	208 94																		20F		
20G	20	546.36	6096	609	580	554	530	508 480	487 425	468 378	451 337	435 302	420 272	404 246	379 223	355 202	334 184	315 169	297 155	281 142	266 131	252 121	239 112	227 103																			20G	
20H	20	620.84	7752					646 560	620 495	596 440	567 393	527 352	492 317	459 286	430 259	404 236	380 215	358 196	337 180	319 165	302 152	286 141	272 130	258 120																			20H	
20I	20	733.09	7660					638 578	612 514	589 459	567 411	547 370	528 334	510 303	494 303	477 275	448 251	422 230	398 210	377 193	356 178	338 164	321 152	305 141																			20I	
20J	20	951.39	7412					617	592	570	549	529	511 477	494 430	478 390	463 355	449 323	436 296	423 271	411 249	400 229	390 212	380 196	370 181																			20J	
22D	22	422.66	5898	589	561	536 526	512 460	489 405	450 358	416 318	386 284	359 255	335 229	313 207 311	293 188 282	275 171 256	258 155 233	243 142 213	230 130 196	217 120 180	205 110 165	195 102 153																					22D	
22E	22	502.36	5684	568	541	516	494	473	454 426	437 379	421 338	406 303	392 273	372 246 370	348 223 335	327 203 305	289 185 278	273 169 254	258 142 214	244 131 197	231 121 182	220 112 168	209 104 156																			22E		
22F	22	552.48	5592	559	532	508	486	466	447	430 419	414 374	399 335	385 302	372 272	360 247	349 224 337	338 205 307	318 187 257	300 171 236	284 157 218	269 145 201	255 134 186	242 115 172																			22F		
22G	22	602.66	6088	608	579	553	529	507	487	468 460	450 410	434 368	419 331	405 299	392 271	380 246 370	368 224 337	347 205 308	327 188 259	310 173 239	293 159 221	278 147 204	264 136 189	251 126 175	239 117 163	227 109 152	217 101 142	207 94 142													22G			
22H	22	684.72	7347					612	587	565 535	544 478	524 428	506 386	489 348	474 316	445 305	419 279 384	394 256 353	372 235 325	352 216 300	333 200 277	316 185 257	300 171 238	285 147 204	271 136 189	258 127 175	246 118 165	235 110 165													22H			
22I	22	808.24	7164					597	573	551	530	511 500	494 450	477 407	462 368	447 335	434 305	421 279 384	409 256 353	398 235 325	387 216 300	373 200 277	354 185 257	336 171 239	320 159 222	305 148 207	291 138 193	278 129 165													22I			
22J	22	1048.54	8186					682	654	629	606	584	564	545 523	428 474	511 431	496 393	481 359	467 329	454 302	442 278	430 257	419 238	409 220	399 205	389 190	378 177	361 165														22J		

WHERE LIVE LOAD IS NOT INDICATED, LIVE LOAD CAPACITY EQUALS TOTAL LOAD CAPACITY.
 CARRYING CAPACITIES TO RIGHT OF HEAVY LINE ARE GOVERNED BY RESISTING MOMENT OF CHORDS.
 CARRYING CAPACITIES TO LEFT OF HEAVY LINE ARE GOVERNED BY THE END REACTION.
 SPANS TO THE RIGHT OF THE DASHED LINES ARE TO BE USED FOR ROOF CONSTRUCTION ONLY.

MACOMBER V-BEAM LOAD TABLE

Allowable Total Loads in Pounds per Lineal Foot. Factor of Safety = 1.65.

Size	Mem. Depth (In.)	Resist. Moment (In.-K.)	Max. End Reaction (Lbs.)	CLEAR SPAN IN FEET																												Size
				8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32				
8A	8	76.36	1630	407	362	326	296	271	250	232	217	198																	8A			
						259	200		157	126	102	84																				
									236	189	153	126																				
8B	8	93.21	2245	561	498	449	408	374	345	317	276	242																	8B			
						426	320	246	193	155	126	104																				
								369	290	232	189	156																				
10A	10	97.63	1943	485	431	388	353	323	299	277	259	242	225	200	180	162													10A			
									256	205	167	137	114	96	82	70																
											250	206	172	145	123	105																
10B	10	119.09	2984					497	459	405	352	310	274	245	219	198													10B			
									314	252	205	168	140	118	100	86																
										378	307	253	211	177	151	129																
10C	10	147.81	2917					486	448	416	389	364	340	304	272	246													10C			
									392	314	255	210	175	148	125	107																
											383	316	263	222	188	161																
10D	10	184.84	3614					602	556	516	481	451	425	380	341	308													10D			
									490	392	319	263	219	184	157	134																
											479	394	329	277	235	202																
12A	12	118.96	1988	497	441	397	361	331	305	284	265	248	233	220	209	198	179	163	149	137									12A			
											246	202	169	142	121	103	89	77	68	60												
														213	181	155	134	116	102	90												
12B	12	144.90	3124					520	480	446	416	377	334	298	267	241	219	199	182	167									12B			
									465	372	303	249	208	175	149	127	110	96	84	74												
												374	312	263	223	191	165	144	126	111												
12C	12	179.87	3630					605	558	518	484	453	414	370	332	299	271	247	226	208									12C			
										464	377	311	259	218	185	159	137	119	104	92												
													389	327	278	239	206	179	157	138												
12D	12	224.48	3979					663	612	568	530	497	468	442	414	374	339	309	282	259									12D			
											470	387	323	272	231	198	171	149	130	114												
													408	347	297	257	223	195	172													
12E	12	266.60	3773					628	580	539	503	471	443	419	397	377	359	343	328	308									12E			
												459	383	322	274	235	203	176	154	136												
																353	304	265	232	204												
12F	12	293.69	4716									589	554	524	496	471	443	404	370	339									12F			
												510	425	358	304	261	225	196	171	151												
															457	391	338	294	257	226												
14B	14	170.78	3699								528	493	444	393	351	315	284	258	235	215	197	182	168	156	145				14B			
											517	420	346	289	243	207	177	153	133	116	102	90	80	72	64							
															310	266	230	200	175	154	136	121	108	97								
14C	14	212.00	4367					623	582	545	489	436	391	353	320	292	267	245	226	209	193	180							14C			
									523	431	359	302	257	220	190	165	145	127	113	100	89	80										
													386	331	286	248	217	191	169	150	134	120										
14D	14	264.12	4023					574	536	502	473	447	423	402	383	363	332	305	281	260	241	224							14D			
											446	375	319	274	236	205	180	158	140	124	111	99										
															355	308	270	237	210	187	167	149										
14E	14	313.75	4850						606	570	538	510	485	461	432	395	363	334	309	286	266								14E			
											530	447	380	325	281	244	214	188	166	148	132	118										
															422	367	321	282	250	222	198	178										
14F	14	345.45	5266						658	619	585	554	526	501	475	435	399	368	340	315	293								14F			
											587	495	421	361	311	271	237	208	184	164	146	131										
															467	406	356	313	277	246	220	197										
14G	14	377.45	5141						642	604	571	541	514	489	467	447	428	402	372	345	320								14G			
											545	463	397	343	298	261	229	203	180	161	144											
															447	391	344	305	271	242	217											
16B	16	196.66	2699								337	317	299	284	269	257	245	234	224	209	193	179	167						16B			
															273	234	202	176	154	135	120	106	95	85								
																		231	203	180	160	143	128									
16C	16	244.06	4074						509	479	452	428	406	368	336	307</																

MACOMBER V-BEAM LOAD TABLE (Continued)

Allowable Total Loads in Pounds per Lineal Foot. Factor of Safety = 1.65.

Size	Nominal Depth (in.)	Resisting Moment (in.-K.)	Max. End Reaction (Lbs.)	CLEAR SPAN IN FEET																
				20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
24D	24	462.30	5275	527	502	479	458	439	422	405 381	390 340	376 305	363 274	342 248	320 224	300 204	283 186 279	266 170 255	251 156 234	237 143 215
24E	24	549.51	5694	569	542	517	495	474	455	438	421 405	406 363	392 326	379 295	367 267	355 243	336 221 332	316 202 304	299 185 272	282 170 256
24F	24	604.24	6889					574	551	529 501	510 447	492 401	475 361	447 326	419 295	393 268	369 245 367	348 224 336	328 205 308	310 188 283
24G	24	658.96	6784					565	542	521	502 490	484 440	467 396	452 357	437 324	424 294	403 268	380 245 368	358 225 338	338 207 310
24H	24	748.60	8850									632 512	593 461	554 416	519 377	487 343	458 313	431 286 429	407 262 393	385 241 361
24I	24	883.39	8599									614 597	593 538	573 486	554 440	537 400	521 365	505 333 500	480 306 459	454 281 421
24J	24	1145.63	8768									626	604	584	565	548 514	531 469	515 429	501 393	487 361
26D	26	501.93	6332	633	603	575	550	527	506 505	487 449	459 401	426 355	397 323	371 292	348 265	326 241	307 219	289 200	273 184	258 169 253
26E	26	596.66	6130					510	490	471	454	437 428	422 385	408 348	395 315	383 286	365 261	344 239	324 219	306 201 302
26F	26	656.00	6041					503	483	464	447	431	416	402 384	389 348	377 316	366 288	355 264	345 242	335 222 333
26G	26	715.27	8190							630	606 578	585 518	564 466	529 421	496 382	465 347	437 316	412 289	389 265	367 243 365
26H	26	812.48	8013							616	593	572	552 543	534 490	516 444	500 404	485 368	468 337	442 309	417 283
26I	26	958.54	9430									673	650 633	628 572	608 518	589 471	571 429	552 393	521 360	493 331
26J	26	1242.78	9303									664	641	620	600	581	563 552	547 504	531 462	516 425
28D	28	541.57	7720							534 523	495 467	460 418	429 376	401 340	375 308	352 280	331 255	312 233	294 214	278 197
28E	28	643.81	7433							571	550	530 498	510 448	476 405	446 367	419 333	394 304	371 278	350 255	331 234
28F	28	707.75	7310							562	541	522	504 495	487 447	471 405	456 368	433 336	408 307	385 281	364 259
28G	28	771.57	7211							554	534	515	497	480	465 444	450 404	437 368	424 336	412 308	396 283
28H	28	876.36	8156							627	604	582	562	543	526 517	509 470	494 428	479 392	466 359	450 330
28I	28	1033.69	9220									658	635	614	594	576 548	558 499	542 457	526 419	512 385
28J	28	1339.93	8950									639	617	596	577	559	542	526	511	497 494

CAPACITY SHOWN ON FIRST LINE FOR EACH SIZE IS TOTAL LOAD CAPACITY.
 CAPACITY SHOWN IN BLUE IS LIVE LOAD CAPACITY FOR DEFLECTION OF 1/360 OF SPAN.
 CAPACITY SHOWN IN RED IS LIVE LOAD CAPACITY FOR DEFLECTION OF 1/240 OF SPAN.
 SPANS TO THE RIGHT OF THE DASHED LINES ARE TO BE USED FOR ROOF CONSTRUCTION ONLY.

MACOMBER V-BEAM LOAD TABLE (Continued)

Allowable Total Loads in Pounds per Lineal Foot. Factor of Safety = 1.65.

CLEAR SPAN IN FEET																				Size
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	
225 132 198	213 122 183																			24D
267 157 236	253 145 217	240 134 201	228 124 186																	24E
294 173 260	278 160 240	264 148 222	251 137 206																	24F
320 190 286	304 176 264	288 162 244	274 150 226	261 140 210	249 131 195	237 121 182	226 113 170	216 106 159	207 99 148	198 93 139	190 87 131								24G	
364 222 333	345 205 307	328 189 284	311 175 263	296 163 244	282 151 227	269 141 212	257 132 198	246 123 185	235 115 173	225 108 162	216 101 152								24H	
430 259 388	407 239 358	387 221 331	368 205 307	350 190 285	333 177 265	318 165 247	304 154 231	290 144 216	278 134 202	266 126 189	255 118 178								24I	
473 333	461 307	449 284 426	438 263 395	427 244 367	417 227 341	407 212 316	394 198 297	377 185 277	360 173 259	345 162 243	331 152 226								24J	
244 155 233	231 143 215																			26D
290 185 278	275 171 256	261 158 237	248 146 220																	26E
19 204 307	302 189 383	287 175 262	273 162 243																	26F
348 224 337	330 207 311	313 191 287	298 177 266	283 165 247	270 153 230	257 143 214	246 133 200	235 124 187	225 116 175	215 109 164	206 102 154	198 96 145	190 91 136						26G	
395 261 392	375 241 362	356 223 335	338 207 310	322 192 288	307 178 268	292 166 249	279 155 233	267 145 218	255 136 204	245 127 191	235 119 179	225 112 168	216 105 158						26H	
466 305 457	442 281 422	420 260 390	399 241 362	380 224 336	362 208 312	345 194 291	330 181 272	315 169 254	301 158 238	289 148 223	277 139 209	266 131 197	255 123 185	245 116 174	236 109 164				26I	
502 391	489 361	477 334	465 310	453 287 431	443 267 401	432 249 374	422 232 349	409 217 326	391 203 305	375 191 286	359 179 269	345 168 253	331 158 238	318 149 224	306 141 211				26J	
263 181	250 167																			28D
313 215	297 199	282 184 276	268 170 256																	28E
344 238	326 220	310 203 305	294 188 283																	28F
375 261	356 241	338 223 334	321 206 310	305 192 288	291 178 268	278 166 249	265 155 233	254 145 217	243 136 204	232 127 191	223 119 179	214 112 168	205 105 158						28G	
426 304	404 280	384 259	365 240 361	347 223 335	331 208 312	315 193 290	301 180 271	288 169 253	276 158 237	264 148 222	253 139 209	243 131 196	233 123 184						28H	
498 354	477 327	453 302	430 280 421	409 260 391	390 242 363	372 225 336	355 210 316	340 197 295	325 184 276	311 173 259	299 162 243	287 152 229	275 143 215	264 135 203	254 127 191	245 120 181	236 114 171	227 107 161	219 102 153	28I
483 455	471 420	458 388	447 360	436 334	426 311	416 290	406 270	397 253 379	389 236 355	380 222 333	372 208 312	365 196 294	357 184 276	343 173 260	330 164 246	318 154 232	306 146 219	295 138 207	284 131 197	28J

WHERE LIVE LOAD IS NOT INDICATED, LIVE LOAD CAPACITY EQUALS TOTAL LOAD CAPACITY.
CARRYING CAPACITIES TO RIGHT OF HEAVY LINE ARE GOVERNED BY RESISTING MOMENT OF CHORDS.
CARRYING CAPACITIES TO LEFT OF HEAVY LINE ARE GOVERNED BY THE END REACTION.

SPANS TO THE RIGHT OF THE DASHED LINES ARE TO BE USED FOR ROOF CONSTRUCTION ONLY.