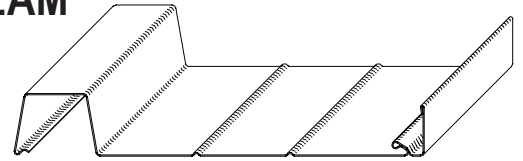


LOAD TABLES
STEEL
ASTM A653
FY=33KSI
12" COVERAGE

MONARCH BATTEN SEAM ROOF PANEL MRB120

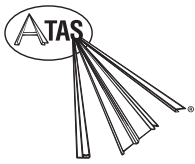


L/180 DEFLECTION CRITERIA 22 GAUGE STEEL							L/240 DEFLECTION CRITERIA 22 GAUGE STEEL						
I= 0.250 in. ⁴ /ft. (defl.)			St= 0.482 cubic in/ft. (bend.)				I= 0.250 in. ⁴ /ft. (defl.)			St= 0.482 cubic in/ft. (bend.)			
Yt= 1.523 in.			Sb= 0.152 cubic in/ft. (bend.)				Yt= 1.523 in.			Sb= 0.152 cubic in/ft. (bend.)			
Yb= 0.954 in.							Yb= 0.954 in.						
LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD			LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD		
	SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN		SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN
10	* 12'- 11"	15'- 7"	* 16'- 0"	* 11'- 1"	* 14'- 11"	* 13'- 9"	10	* 11'- 9"	15'- 7"	* 14'- 6"	* 10'- 1"	* 13'- 7"	* 12'- 6"
15	* 11'- 4"	12'- 8"	* 14'- 0"	* 9'- 9"	12'- 8"	* 12'- 0"	15	* 10'- 3"	12'- 8"	* 12'- 8"	* 8'- 10"	* 11'- 10"	* 9'- 5"
20	* 10'- 3"	11'- 0"	12'- 3"	* 8'- 10"	11'- 0"	* 10'- 11"	20	* 9'- 4"	11'- 0"	* 11'- 6"	* 8'- 0"	* 10'- 9"	* 8'- 6"
25	* 9'- 6"	9'- 10"	11'- 0"	* 8'- 2"	9'- 10"	* 10'- 1"	25	* 8'- 8"	9'- 10"	* 10'- 8"	* 7'- 5"	9'- 10"	* 7'- 11"
30	* 9'- 0"	9'- 0"	10'- 0"	* 7'- 8"	9'- 0"	* 9'- 6"	30	* 8'- 2"	9'- 0"	10'- 0"	* 7'- 0"	9'- 0"	* 7'- 5"
35	* 8'- 6"	8'- 4"	9'- 3"	* 7'- 4"	8'- 4"	* 9'- 0"	35	* 7'- 9"	8'- 4"	9'- 3"	* 6'- 8"	8'- 4"	* 7'- 1"
40	* 8'- 2"	7'- 9"	8'- 8"	* 7'- 0"	7'- 9"	* 8'- 8"	40	* 7'- 5"	7'- 9"	8'- 8"	* 6'- 4"	7'- 9"	* 6'- 9"
45	* 7'- 10"	7'- 4"	8'- 2"	* 6'- 9"	7'- 4"	8'- 2"	45	* 7'- 1"	7'- 4"	8'- 2"	* 6'- 1"	7'- 4"	* 6'- 6"
50	* 7'- 7"	6'- 11"	7'- 9"	* 6'- 6"	6'- 11"	7'- 9"	50	* 6'- 10"	6'- 11"	7'- 9"	* 5'- 11"	6'- 11"	* 6'- 3"
55	* 7'- 4"	6'- 7"	7'- 5"	* 6'- 3"	6'- 7"	7'- 5"	55	* 6'- 8"	6'- 7"	7'- 5"	* 5'- 8"	6'- 7"	* 6'- 1"
60	* 7'- 1"	6'- 4"	7'- 1"	* 6'- 1"	6'- 4"	7'- 1"	60	* 6'- 5"	6'- 4"	7'- 1"	* 5'- 6"	6'- 4"	* 5'- 11"
65	* 6'- 11"	6'- 1"	6'- 10"	* 5'- 11"	6'- 1"	6'- 10"	65	* 6'- 3"	6'- 1"	6'- 10"	* 5'- 5"	6'- 1"	* 5'- 9"
70	* 6'- 9"	5'- 10"	6'- 7"	* 5'- 10"	5'- 10"	6'- 7"	70	* 6'- 1"	5'- 10"	6'- 7"	* 5'- 3"	5'- 10"	* 5'- 7"

L/180 DEFLECTION CRITERIA 24 GAUGE							L/240 DEFLECTION CRITERIA 24 GAUGE						
I= 0.185 in. ⁴ /ft. (defl.)			St= 0.379 cubic in/ft. (bend.)				I= 0.185 in. ⁴ /ft. (defl.)			St= 0.379 cubic in/ft. (bend.)			
Yt= 1.563 in.			Sb= 0.118 cubic in/ft. (bend.)				Yt= 1.563 in.			Sb= 0.118 cubic in/ft. (bend.)			
Yb= 0.909 in.							Yb= 0.909 in.						
LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD			LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD		
	SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN		SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN
10	* 11'- 8"	13'- 8"	* 14'- 6"	* 10'- 0"	* 13'- 6"	* 12'- 5"	10	* 10'- 8"	13'- 8"	* 13'- 2"	* 9'- 1"	* 12'- 3"	* 11'- 3"
15	* 10'- 3"	11'- 2"	12'- 6"	* 8'- 9"	11'- 2"	* 10'- 10"	15	* 9'- 3"	11'- 2"	* 11'- 6"	* 8'- 0"	* 10'- 8"	* 9'- 5"
20	* 9'- 3"	9'- 8"	10'- 10"	* 8'- 0"	9'- 8"	* 9'- 10"	20	* 8'- 5"	9'- 8"	* 10'- 5"	* 7'- 3"	9'- 8"	* 8'- 6"
25	* 8'- 7"	8'- 8"	9'- 8"	* 7'- 5"	8'- 8"	* 9'- 2"	25	* 7'- 10"	8'- 8"	* 9'- 8"	* 6'- 8"	8'- 8"	* 7'- 11"
30	* 8'- 1"	7'- 11"	8'- 10"	* 6'- 11"	7'- 11"	* 8'- 7"	30	* 7'- 4"	7'- 11"	8'- 10"	* 6'- 4"	7'- 11"	* 7'- 5"
35	* 7'- 8"	7'- 4"	8'- 2"	* 6'- 7"	7'- 4"	* 8'- 2"	35	* 7'- 0"	7'- 4"	8'- 2"	* 6'- 0"	7'- 4"	* 7'- 1"
40	* 7'- 4"	6'- 10"	7'- 8"	* 6'- 4"	6'- 10"	7'- 8"	40	* 6'- 8"	6'- 10"	7'- 8"	* 5'- 9"	6'- 10"	* 6'- 9"
45	* 7'- 1"	6'- 5"	7'- 2"	* 6'- 1"	6'- 5"	7'- 2"	45	* 6'- 5"	6'- 5"	7'- 2"	* 5'- 6"	6'- 5"	* 6'- 6"
50	* 6'- 10"	6'- 1"	6'- 10"	* 5'- 10"	6'- 1"	6'- 10"	50	* 6'- 2"	6'- 1"	6'- 10"	* 5'- 4"	6'- 1"	* 6'- 3"
55	* 6'- 7"	5'- 10"	6'- 6"	* 5'- 8"	5'- 10"	6'- 6"	55	* 6'- 0"	5'- 10"	6'- 6"	* 5'- 2"	5'- 10"	* 6'- 1"
60	* 6'- 5"	5'- 7"	6'- 3"	* 5'- 6"	5'- 7"	6'- 3"	60	* 5'- 10"	5'- 7"	6'- 3"	* 5'- 0"	5'- 7"	* 5'- 11"
65	* 6'- 3"	5'- 4"	6'- 0"	* 5'- 4"	5'- 4"	6'- 0"	65	* 5'- 8"	5'- 4"	6'- 0"	* 4'- 10"	5'- 4"	* 5'- 9"
70	* 6'- 1"	5'- 2"	5'- 9"	* 5'- 2"	5'- 2"	5'- 9"	70	* 5'- 6"	5'- 2"	5'- 9"	* 4'- 9"	5'- 2"	* 5'- 7"

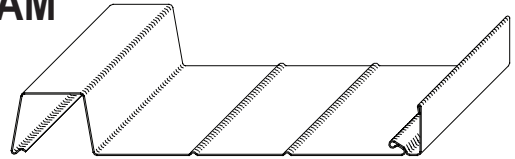
Notes:

- * Indicates maximum span controlled by deflection.
- All loads are applied perpendicular to surface of panel.
- No increase for wind loading has been assumed.
- Since allowable loads and spans can be affected by actual conditions of use, information in these tables is intended for use only by those qualified to assess these effects.



LOAD TABLES
STEEL
ASTM A653
FY=33KSI
16" COVERAGE

MONARCH BATTEN SEAM ROOF PANEL MRB160



L/180 DEFLECTION CRITERIA 22 GAUGE						
I= 0.214 in. ⁴ /ft. (defl.)			St= 0.497 cubic in./ft. (bend.)			
Yt= 1.637 in.			Sb= 0.114 cubic in./ft. (bend.)			
Yb= 0.957 in.						
LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD		
	SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN
10	* 12'- 3"	13'- 6"	15'- 4"	* 10'- 2"	13'- 6"	* 12'- 7"
15	* 10'- 9"	11'- 0"	12'- 3"	* 8'- 11"	11'- 0"	* 11'- 0"
20	* 9'- 9"	9'- 6"	10'- 8"	* 8'- 1"	9'- 6"	* 10'- 0"
25	* 9'- 0"	8'- 6"	9'- 6"	* 7'- 6"	8'- 6"	* 9'- 3"
30	* 8'- 6"	7'- 9"	8'- 8"	* 7'- 1"	7'- 9"	8'- 8"
35	* 8'- 1"	7'- 2"	8'- 0"	* 6'- 8"	7'- 2"	8'- 0"
40	* 7'- 9"	6'- 9"	7'- 6"	* 6'- 5"	6'- 9"	7'- 6"
45	* 7'- 5"	6'- 4"	7'- 1"	* 6'- 2"	6'- 4"	7'- 1"
50	* 7'- 2"	6'- 0"	6'- 9"	* 5'- 11"	6'- 0"	6'- 9"
55	* 6'- 11"	5'- 9"	6'- 5"	5'- 9"	5'- 9"	6'- 5"
60	* 6'- 9"	5'- 6"	6'- 1"	5'- 6"	5'- 6"	6'- 1"
65	* 6'- 7"	5'- 3"	5'- 11"	5'- 3"	5'- 3"	5'- 11"
70	* 6'- 5"	5'- 1"	5'- 8"	5'- 1"	5'- 1"	5'- 8"

L/240 DEFLECTION CRITERIA 22 GAUGE						
I= 0.214 in. ⁴ /ft. (defl.)			St= 0.497 cubic in./ft. (bend.)			
Yt= 1.637 in.			Sb= 0.114 cubic in./ft. (bend.)			
Yb= 0.957 in.						
LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD		
	SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN
10	* 11'- 2"	13'- 6"	* 13'- 10"	* 9'- 3"	* 12'- 5"	* 11'- 5"
15	* 9'- 9"	11'- 0"	* 12'- 1"	* 8'- 1"	* 10'- 10"	* 9'- 5"
20	* 8'- 10"	9'- 6"	10'- 8"	* 7'- 4"	9'- 6"	* 8'- 6"
25	* 8'- 3"	8'- 6"	9'- 6"	* 6'- 10"	8'- 6"	* 7'- 11"
30	* 7'- 9"	8'- 8"	8'- 8"	* 6'- 5"	7'- 9"	* 7'- 5"
35	* 7'- 4"	7'- 2"	8'- 0"	* 6'- 1"	7'- 2"	* 7'- 1"
40	* 7'- 0"	6'- 9"	7'- 6"	* 5'- 10"	6'- 9"	* 6'- 9"
45	* 6'- 9"	6'- 4"	7'- 1"	* 5'- 7"	6'- 4"	* 6'- 6"
50	* 6'- 6"	6'- 0"	6'- 9"	* 5'- 5"	6'- 0"	* 6'- 3"
55	* 6'- 4"	5'- 9"	6'- 5"	* 5'- 3"	5'- 9"	* 6'- 1"
60	* 6'- 1"	5'- 6"	6'- 1"	* 5'- 1"	5'- 6"	* 5'- 11"
65	* 6'- 0"	5'- 3"	5'- 11"	* 4'- 11"	5'- 3"	* 5'- 9"
70	* 5'- 10"	5'- 1"	5'- 8"	* 4'- 10"	5'- 1"	* 5'- 7"

L/180 DEFLECTION CRITERIA 24 GAUGE						
I= 0.151 in. ⁴ /ft. (defl.)			St= 0.386 cubic in./ft. (bend.)			
Yt= 1.660 in.			Sb= 0.089 cubic in./ft. (bend.)			
Yb= 0.911 in.						
LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD		
	SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN
10	* 10'- 11"	11'- 11"	13'- 4"	* 9'- 2"	11'- 11"	* 11'- 3"
15	* 9'- 7"	9'- 8"	10'- 10"	* 8'- 0"	9'- 8"	* 9'- 10"
20	* 8'- 8"	8'- 5"	9'- 5"	* 7'- 3"	8'- 5"	* 8'- 11"
25	* 8'- 1"	7'- 6"	8'- 5"	* 6'- 9"	7'- 6"	* 8'- 4"
30	* 7'- 7"	6'- 10"	7'- 8"	* 6'- 4"	6'- 10"	7'- 8"
35	* 7'- 2"	6'- 4"	7'- 1"	* 6'- 0"	6'- 4"	7'- 1"
40	* 6'- 10"	5'- 11"	6'- 8"	* 5'- 9"	5'- 11"	6'- 8"
45	* 6'- 7"	5'- 7"	6'- 3"	* 5'- 6"	5'- 7"	6'- 3"
50	* 6'- 5"	5'- 4"	5'- 11"	5'- 4"	5'- 4"	5'- 11"
55	* 6'- 2"	5'- 1"	5'- 8"	5'- 1"	5'- 1"	5'- 8"
60	* 6'- 0"	4'- 10"	5'- 5"	4'- 10"	4'- 10"	5'- 5"
65	* 5'- 10"	4'- 8"	5'- 2"	4'- 8"	4'- 8"	5'- 2"
70	* 5'- 8"	4'- 6"	5'- 0"	4'- 6"	4'- 6"	5'- 0"

L/240 DEFLECTION CRITERIA 24 GAUGE						
I= 0.151 in. ⁴ /ft. (defl.)			St= 0.386 cubic in./ft. (bend.)			
Yt= 1.660 in.			Sb= 0.089 cubic in./ft. (bend.)			
Yb= 0.911 in.						
LOAD (PSF)	DOWNWARD LOAD			UPWARD LOAD		
	SINGLE SPAN	DOUBLE SPAN	THREE SPAN	SINGLE SPAN	DOUBLE SPAN	THREE SPAN
10	* 9'- 11"	11'- 11"	* 12'- 3"	* 8'- 3"	* 11'- 1"	* 10'- 3"
15	* 8'- 8"	9'- 8"	* 10'- 9"	* 7'- 3"	9'- 8"	* 9'- 5"
20	* 7'- 10"	8'- 5"	9'- 5"	* 6'- 7"	8'- 5"	* 8'- 6"
25	* 7'- 4"	7'- 6"	8'- 5"	* 6'- 1"	7'- 6"	* 7'- 11"
30	* 6'- 10"	6'- 10"	7'- 8"	* 5'- 9"	6'- 10"	* 7'- 5"
35	* 6'- 6"	6'- 4"	7'- 1"	* 5'- 5"	6'- 4"	* 7'- 1"
40	* 6'- 3"	5'- 11"	6'- 8"	* 5'- 2"	5'- 11"	* 6'- 8"
45	* 6'- 0"	5'- 7"	6'- 3"	* 5'- 0"	5'- 7"	6'- 3"
50	* 5'- 9"	5'- 4"	5'- 11"	* 4'- 10"	5'- 4"	5'- 11"
55	* 5'- 7"	5'- 1"	5'- 8"	* 4'- 8"	5'- 1"	5'- 8"
60	* 5'- 5"	4'- 10"	5'- 5"	* 4'- 7"	4'- 10"	5'- 5"
65	* 5'- 4"	4'- 8"	5'- 2"	* 4'- 5"	4'- 8"	5'- 2"
70	* 5'- 2"	4'- 6"	5'- 0"	* 4'- 4"	4'- 6"	5'- 0"

- Notes:
- * Indicates maximum span controlled by deflection.
 - All loads are applied perpendicular to surface of panel.
 - No increase for wind loading has been assumed.
 - Since allowable loads and spans can be affected by actual conditions of use, information in these tables is intended for use only by those qualified to assess these effects.
 - Load tables are based upon section property analysis. Other factors such as fastener adequacy may apply to allowable span conditions per project.