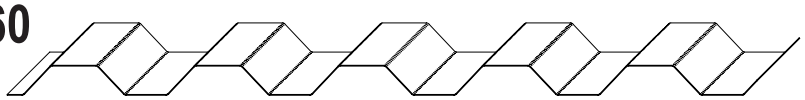
LOAD TABLES

ALUMINUM
ASTM B209
3105-H14

36" COVERAGE

# RIB PANELS
# BWR360



## L/180 DEFLECTION CRITERIA .032 FTY=18KSI

POSITIVE BENDING
Yt= 0.7322 in.
St= 0.8037 cubic in/ft. (bend.)
Sb= 0.7832 cubic in/ft. (bend.)
I= 0.6013 in.^4/ft. (defl.)

NEGATIVE BENDING
Yt= 0.7322 in.
St= 0.8037 cubic in/ft. (bend.)
Sb= 0.7832 cubic in/ft. (bend.)
I= 0.6013 in.^4/ft. (defl.)

| LOAD (PSF) | DOWNWARD LOAD | | | UPWARD LOAD | | |
|---|---|---|---|---|---|---|
| | SINGLE SPAN | DOUBLE SPAN | THREE SPAN | SINGLE SPAN | DOUBLE SPAN | THREE SPAN |
| 10 | * 12'- 1" | * 16'- 3" | * 14'- 11" | * 12'- 1" | * 16'- 3" | * 14'- 11" |
| 15 | * 10'- 7" | * 14'- 2" | * 13'- 1" | * 10'- 7" | * 14'- 2" | * 13'- 1" |
| 20 | * 9'- 7" | * 12'- 10" | * 11'- 10" | * 9'- 7" | * 12'- 10" | * 11'- 10" |
| 25 | * 8'- 11" | * 11'- 11" | * 11'- 0" | * 8'- 11" | * 11'- 11" | * 11'- 0" |
| 30 | * 8'- 4" | 11'- 2" | * 10'- 4" | * 8'- 4" | 11'- 2" | * 10'- 4" |
| 35 | * 7'- 11" | 10'- 4" | * 9'- 10" | * 7'- 11" | 10'- 4" | * 9'- 10" |
| 40 | * 7'- 7" | 9'- 8" | * 9'- 5" | * 7'- 7" | 9'- 8" | * 9'- 5" |
| 45 | * 7'- 4" | 9'- 1" | * 9'- 0" | * 7'- 4" | 9'- 1" | * 9'- 0" |
| 50 | * 7'- 1" | 8'- 7" | * 8'- 9" | * 7'- 1" | 8'- 8" | * 8'- 9" |
| 55 | * 6'- 10" | 8'- 2" | * 8'- 5" | * 6'- 10" | 8'- 3" | * 8'- 5" |
| 60 | * 6'- 8" | 7'- 10" | * 8'- 2" | * 6'- 8" | 7'- 11" | * 8'- 2" |
| 65 | * 6'- 5" | 7'- 7" | * 8'- 0" | * 6'- 5" | 7'- 7" | * 8'- 0" |
| 70 | * 6'- 4" | 7'- 3" | * 7'- 9" | * 6'- 4" | 7'- 4" | * 7'- 9" |

## L/240 DEFLECTION CRITERIA .032 FTY=18KSI

POSITIVE BENDING
Yt= 0.7322 in.
St= 0.8037 cubic in/ft. (bend.)
Sb= 0.7832 cubic in/ft. (bend.)
I= 0.6013 in.^4/ft. (defl.)

NEGATIVE BENDING
Yt= 0.7322 in.
St= 0.8037 cubic in/ft. (bend.)
Sb= 0.7832 cubic in/ft. (bend.)
I= 0.6013 in.^4/ft. (defl.)

| LOAD (PSF) | DOWNWARD LOAD | | | UPWARD LOAD | | |
|---|---|---|---|---|---|---|
| | SINGLE SPAN | DOUBLE SPAN | THREE SPAN | SINGLE SPAN | DOUBLE SPAN | THREE SPAN |
| 10 | * 11'- 0" | * 14'- 9" | * 13'- 7" | * 11'- 0" | * 14'- 9" | * 13'- 7" |
| 15 | * 9'- 7" | * 12'- 10" | * 11'- 10" | * 9'- 7" | * 12'- 10" | * 11'- 10" |
| 20 | * 8'- 8" | * 11'- 8" | * 10'- 9" | * 8'- 8" | * 11'- 8" | * 10'- 9" |
| 25 | * 8'- 1" | * 10'- 10" | * 10'- 0" | * 8'- 1" | * 10'- 10" | * 10'- 0" |
| 30 | * 7'- 7" | * 10'- 2" | * 9'- 5" | * 7'- 7" | * 10'- 2" | * 9'- 5" |
| 35 | * 7'- 3" | * 9'- 8" | * 8'- 11" | * 7'- 3" | * 9'- 8" | * 8'- 11" |
| 40 | * 6'- 11" | * 9'- 3" | * 8'- 6" | * 6'- 11" | * 9'- 3" | * 8'- 6" |
| 45 | * 6'- 8" | * 8'- 11" | * 8'- 2" | * 6'- 8" | * 8'- 11" | * 8'- 2" |
| 50 | * 6'- 5" | * 8'- 7" | * 7'- 11" | * 6'- 5" | * 8'- 7" | * 7'- 11" |
| 55 | * 6'- 2" | 8'- 2" | * 7'- 8" | * 6'- 2" | 8'- 3" | * 7'- 8" |
| 60 | * 6'- 0" | 7'- 10" | * 7'- 5" | * 6'- 0" | 7'- 11" | * 7'- 5" |
| 65 | * 5'- 10" | 7'- 7" | * 7'- 3" | * 5'- 10" | 7'- 7" | * 7'- 3" |
| 70 | * 5'- 9" | 7'- 3" | * 7'- 1" | * 5'- 9" | 7'- 4" | * 7'- 1" |

## L/180 DEFLECTION CRITERIA .040 FTY=18KSI

POSITIVE BENDING
Yt= 0.7322 in.
St= 0.9992 cubic in/ft. (bend.)
Sb= 0.9790 cubic in/ft. (bend.)
I= 0.7517 in.^4/ft. (defl.)

NEGATIVE BENDING
Yt= 0.7322 in.
St= 0.9992 cubic in/ft. (bend.)
Sb= 0.9790 cubic in/ft. (bend.)
I= 0.7517 in.^4/ft. (defl.)

| LOAD (PSF) | DOWNWARD LOAD | | | UPWARD LOAD | | |
|---|---|---|---|---|---|---|
| | SINGLE SPAN | DOUBLE SPAN | THREE SPAN | SINGLE SPAN | DOUBLE SPAN | THREE SPAN |
| 10 | * 13'- 0" | * 17'- 6" | * 16'- 1" | * 13'- 0" | * 17'- 6" | * 16'- 1" |
| 15 | * 11'- 4" | * 15'- 3" | * 14'- 1" | * 11'- 4" | * 15'- 3" | * 14'- 1" |
| 20 | * 10'- 4" | * 13'- 10" | * 12'- 9" | * 10'- 4" | * 13'- 10" | * 12'- 9" |
| 25 | * 9'- 7" | * 12'- 10" | * 11'- 10" | * 9'- 7" | * 12'- 10" | * 11'- 10" |
| 30 | * 9'- 0" | * 12'- 1" | * 11'- 2" | * 9'- 0" | * 12'- 1" | * 11'- 2" |
| 35 | * 8'- 7" | * 11'- 6" | * 10'- 7" | * 8'- 7" | * 11'- 6" | * 10'- 7" |
| 40 | * 8'- 2" | * 11'- 0" | * 10'- 1" | * 8'- 2" | * 11'- 0" | * 10'- 1" |
| 45 | * 7'- 10" | * 10'- 7" | * 9'- 9" | * 7'- 10" | * 10'- 7" | * 9'- 9" |
| 50 | * 7'- 7" | * 10'- 2" | * 9'- 5" | * 7'- 7" | * 10'- 2" | * 9'- 5" |
| 55 | * 7'- 4" | 9'- 10" | * 9'- 1" | * 7'- 4" | 9'- 10" | * 9'- 1" |
| 60 | * 7'- 2" | 9'- 5" | * 8'- 10" | * 7'- 2" | 9'- 5" | * 8'- 10" |
| 65 | * 6'- 11" | 9'- 1" | * 8'- 7" | * 6'- 11" | 9'- 1" | * 8'- 7" |
| 70 | * 6'- 9" | 8'- 9" | * 8'- 5" | * 6'- 9" | 8'- 9" | * 8'- 5" |

## L/240 DEFLECTION CRITERIA .040 FTY=18KSI

POSITIVE BENDING
Yt= 0.7322 in.
St= 0.9992 cubic in/ft. (bend.)
Sb= 0.9790 cubic in/ft. (bend.)
I= 0.7517 in.^4/ft. (defl.)

NEGATIVE BENDING
Yt= 0.7322 in.
St= 0.9992 cubic in/ft. (bend.)
Sb= 0.9790 cubic in/ft. (bend.)
I= 0.7517 in.^4/ft. (defl.)

| LOAD (PSF) | DOWNWARD LOAD | | | UPWARD LOAD | | |
|---|---|---|---|---|---|---|
| | SINGLE SPAN | DOUBLE SPAN | THREE SPAN | SINGLE SPAN | DOUBLE SPAN | THREE SPAN |
| 10 | * 11'- 10" | * 15'- 10" | * 14'- 7" | * 11'- 10" | * 15'- 10" | * 14'- 7" |
| 15 | * 10'- 4" | * 13'- 10" | * 12'- 9" | * 10'- 4" | * 13'- 10" | * 12'- 9" |
| 20 | * 9'- 5" | * 12'- 7" | * 11'- 7" | * 9'- 5" | * 12'- 7" | * 11'- 7" |
| 25 | * 8'- 8" | * 11'- 8" | * 10'- 9" | * 8'- 8" | * 11'- 8" | * 10'- 9" |
| 30 | * 8'- 2" | * 11'- 0" | * 10'- 1" | * 8'- 2" | * 11'- 0" | * 10'- 1" |
| 35 | * 7'- 9" | * 10'- 5" | * 9'- 7" | * 7'- 9" | * 10'- 5" | * 9'- 7" |
| 40 | * 7'- 5" | * 10'- 0" | * 9'- 2" | * 7'- 5" | * 10'- 0" | * 9'- 2" |
| 45 | * 7'- 2" | * 9'- 7" | * 8'- 10" | * 7'- 2" | * 9'- 7" | * 8'- 10" |
| 50 | * 6'- 11" | * 9'- 3" | * 8'- 6" | * 6'- 11" | * 9'- 3" | * 8'- 6" |
| 55 | * 6'- 8" | * 9'- 0" | * 8'- 3" | * 6'- 8" | * 9'- 0" | * 8'- 3" |
| 60 | * 6'- 6" | * 8'- 9" | * 8'- 0" | * 6'- 6" | * 8'- 9" | * 8'- 0" |
| 65 | * 6'- 4" | * 8'- 6" | * 7'- 10" | * 6'- 4" | * 8'- 6" | * 7'- 10" |
| 70 | * 6'- 2" | * 8'- 3" | * 7'- 7" | * 6'- 2" | * 8'- 3" | * 7'- 7" |

## L/180 DEFLECTION CRITERIA .050 FTY=18KSI

POSITIVE BENDING
Yt= 0.7322 in.
St= 1.2407 cubic in/ft. (bend.)
Sb= 1.2237 cubic in/ft. (bend.)
I= 0.9395 in.^4/ft. (defl.)

NEGATIVE BENDING
Yt= 0.7322 in.
St= 1.2407 cubic in/ft. (bend.)
Sb= 1.2237 cubic in/ft. (bend.)
I= 0.9395 in.^4/ft. (defl.)

| LOAD (PSF) | DOWNWARD LOAD | | | UPWARD LOAD | | |
|---|---|---|---|---|---|---|
| | SINGLE SPAN | DOUBLE SPAN | THREE SPAN | SINGLE SPAN | DOUBLE SPAN | THREE SPAN |
| 10 | * 14'- 0" | * 18'- 10" | * 17'- 4" | * 14'- 0" | * 18'- 10" | * 17'- 4" |
| 15 | * 12'- 3" | * 16'- 5" | * 15'- 2" | * 12'- 3" | * 16'- 5" | * 15'- 2" |
| 20 | * 11'- 1" | * 14'- 11" | * 13'- 9" | * 11'- 1" | * 14'- 11" | * 13'- 9" |
| 25 | * 10'- 4" | * 13'- 10" | * 12'- 9" | * 10'- 4" | * 13'- 10" | * 12'- 9" |
| 30 | * 9'- 9" | * 13'- 0" | * 12'- 0" | * 9'- 9" | * 13'- 0" | * 12'- 0" |
| 35 | * 9'- 3" | * 12'- 5" | * 11'- 5" | * 9'- 3" | * 12'- 5" | * 11'- 5" |
| 40 | * 8'- 10" | * 11'- 10" | * 10'- 11" | * 8'- 10" | * 11'- 10" | * 10'- 11" |
| 45 | * 8'- 6" | * 11'- 5" | * 10'- 6" | * 8'- 6" | * 11'- 5" | * 10'- 6" |
| 50 | * 8'- 2" | * 11'- 0" | * 10'- 1" | * 8'- 2" | * 11'- 0" | * 10'- 1" |
| 55 | * 7'- 11" | * 10'- 8" | * 9'- 10" | * 7'- 11" | * 10'- 8" | * 9'- 10" |
| 60 | * 7'- 8" | * 10'- 4" | * 9'- 6" | * 7'- 8" | * 10'- 4" | * 9'- 6" |
| 65 | * 7'- 6" | * 10'- 1" | * 9'- 3" | * 7'- 6" | * 10'- 1" | * 9'- 3" |
| 70 | * 7'- 4" | * 9'- 10" | * 9'- 1" | * 7'- 4" | * 9'- 10" | * 9'- 1" |

## L/240 DEFLECTION CRITERIA .050 FTY=18KSI

POSITIVE BENDING
Yt= 0.7322 in.
St= 1.2407 cubic in/ft. (bend.)
Sb= 1.2237 cubic in/ft. (bend.)
I= 0.9395 in.^4/ft. (defl.)

NEGATIVE BENDING
Yt= 0.7322 in.
St= 1.2407 cubic in/ft. (bend.)
Sb= 1.2237 cubic in/ft. (bend.)
I= 0.9395 in.^4/ft. (defl.)

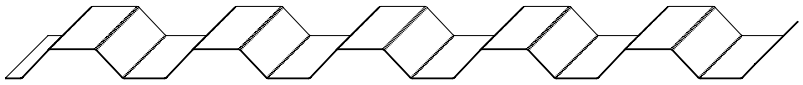
| LOAD (PSF) | DOWNWARD LOAD | | | UPWARD LOAD | | |
|---|---|---|---|---|---|---|
| | SINGLE SPAN | DOUBLE SPAN | THREE SPAN | SINGLE SPAN | DOUBLE SPAN | THREE SPAN |
| 10 | * 12'- 9" | * 17'- 1" | * 15'- 9" | * 12'- 9" | * 17'- 1" | * 15'- 9" |
| 15 | * 11'- 1" | * 14'- 11" | * 13'- 9" | * 11'- 1" | * 14'- 11" | * 13'- 9" |
| 20 | * 10'- 1" | * 13'- 7" | * 12'- 6" | * 10'- 1" | * 13'- 7" | * 12'- 6" |
| 25 | * 9'- 5" | * 12'- 7" | * 11'- 7" | * 9'- 5" | * 12'- 7" | * 11'- 7" |
| 30 | * 8'- 10" | * 11'- 10" | * 10'- 11" | * 8'- 10" | * 11'- 10" | * 10'- 11" |
| 35 | * 8'- 5" | * 11'- 3" | * 10'- 4" | * 8'- 5" | * 11'- 3" | * 10'- 4" |
| 40 | * 8'- 0" | * 10'- 9" | * 9'- 11" | * 8'- 0" | * 10'- 9" | * 9'- 11" |
| 45 | * 7'- 8" | * 10'- 4" | * 9'- 6" | * 7'- 8" | * 10'- 4" | * 9'- 6" |
| 50 | * 7'- 5" | * 10'- 0" | * 9'- 2" | * 7'- 5" | * 10'- 0" | * 9'- 2" |
| 55 | * 7'- 2" | * 9'- 8" | * 8'- 11" | * 7'- 2" | * 9'- 8" | * 8'- 11" |
| 60 | * 7'- 0" | * 9'- 5" | * 8'- 8" | * 7'- 0" | * 9'- 5" | * 8'- 8" |
| 65 | * 6'- 10" | * 9'- 2" | * 8'- 5" | * 6'- 10" | * 9'- 2" | * 8'- 5" |
| 70 | * 6'- 8" | * 8'- 11" | * 8'- 3" | * 6'- 8" | * 8'- 11" | * 8'- 3" |

Notes:
1. * Indicates maximum span controlled by deflection.
2. All loads are applied perpendicular to surface of panel.
3. No increase for wind loading has been assumed.
4. 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.
5. Load tables are based upon section property analysis. Other factors such as fastener adequacy may apply to allowable span conditions per project.

LOAD TABLES
STEEL
ASTM A653
SS 33
36" COVERAGE

# RIB PANELS

## BWR360



L/180 Deflection Criteria FY=33 KSI 20, 22, 24 GAUGE

| AISI Section Properties (per foot of width) | | | | |
|---|---|---|---|---|
| Steel Gauge | (+) I | (+) S | (-) I | (-) S |
| 24 ga. | 0.103 $IN.^4$ | 0.118 $IN.^3$ | 0.107 $IN.^4$ | 0.139 $IN.^3$ |
| 22 ga. | 0.137 $IN.^4$ | 0.160 $IN.^3$ | 0.139 $IN.^4$ | 0.184 $IN.^3$ |
| 20 ga. | 0.171 $IN.^4$ | 0.205 $IN.^3$ | 0.173 $IN.^4$ | 0.223 $IN.^3$ |

| (+/-) Allowable Wind Pressure- PSF | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| PANEL GAUGE | No. of Spans | Span in Feet | | | | | | | | |
| | | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 | 8.5 | 9.0 |
| 24 | 1 | 73 | 55 | 42 | 33 | 26 | 21 | | | |
| | 2 | 83 | 69 | 58 | 49 | 42 | 37 | 32 | 29 | 25 |
| | 3 | 104 | 86 | 72 | 62 | 53 | 43 | 36 | 30 | 25 |
| 22 | 1 | 96 | 72 | 55 | 43 | 35 | 28 | 23 | | |
| | 2 | 113 | 94 | 79 | 67 | 58 | 50 | 44 | 39 | 35 |
| | 3 | 142 | 117 | 98 | 84 | 70 | 57 | 47 | 39 | 33 |
| 20 | 1 | 120 | 90 | 69 | 54 | 43 | 35 | 29 | 24 | 20 |
| | 2 | 145 | 120 | 101 | 86 | 74 | 64 | 56 | 50 | 44 |
| | 3 | 182 | 150 | 126 | 107 | 88 | 71 | 58 | 49 | 41 |

Notes:
1. Section properties were determined in accordance with the Cold Formed Steel Design Manual as published by the American Iron & Steel Industry (AISI).
2. All loads are applied perpendicular to surface of panel.
3. Load/ Span values account for the following:
   A. Panel buckling strength
   B. Deflection limit of L/180
   C. Positive and negative wind considerations
4. Values include a 1/3 increase in "Allowable Wind Pressure".
5. 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.
6. Load tables are based upon section property analysis. Other factors such as fastener adequacy may apply to allowable span conditions per project.