



Maximum Overhead Equipment Loads for GSI 40-Series Tanks Supported from Stiffeners

Please review general GSI recommendations for tank allowable loads, etc. If overhead loads are too high, separate supports to the foundation or optional higher peak load roofs should be considered.

Support systems which tie tank eaves together rigidly are not recommended by GSI. GSI cannot accept warranty claims in the event damage occurs that is related to rigid connections between tanks. Any movement of the individual tanks due to the following conditions may cause destructive loads to the tank roof or other components.

1. Grain load deflection
2. Wind or seismic load deflection
3. Foundation settlement
4. Temperature expansion or contraction

Special bracing and flexible connections of equipment to the tanks should be used to allow only vertical loads to be transferred to the tanks.

Two (2) stiffener columns (not supporting a rafter) may carry an additional vertical load of 1500 pounds, for 3000 pounds total on at least one half the circumference of the tank. **NOTE: Stanchions must not be supported by stiffener columns with a rafter support. These are locations where there is an eave bracket and inside stiffener. (See Figure 1.)**

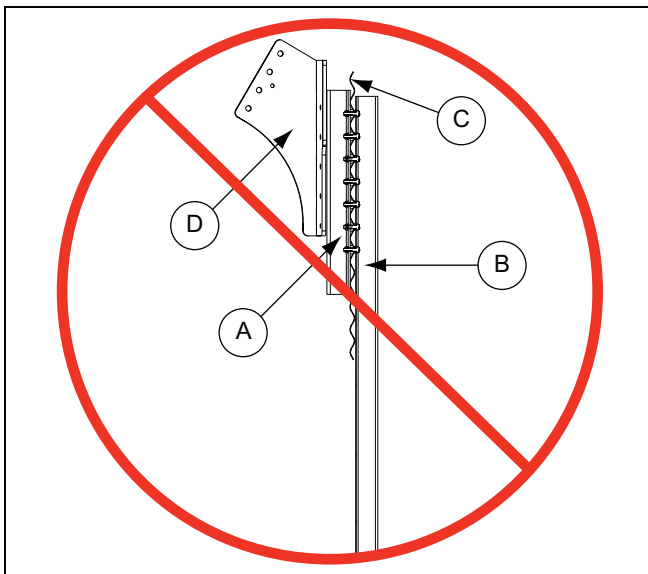


Figure 1 Stiffener Eave Bracket

Ref #	Description
A	Inside Stiffener
B	Outside Stiffener
C	Sidewall
D	Eave Bracket

The center of a column carrying the vertical load should be no more than 6" horizontally from the tank wall.

The column to stiffener connection should cover a minimum vertical length of 62" and must have a maximum bolt spacing of 8".

Wind rings must not be cut at stanchion locations. Provisions must be made to continue the wind ring through the supports. Contact GSI concerning any wind ring relocation.

Date: 02-27-14



Maximum Overhead Equipment Loads for GSI 40-Series Tanks Supported from Stiffeners (Continued)

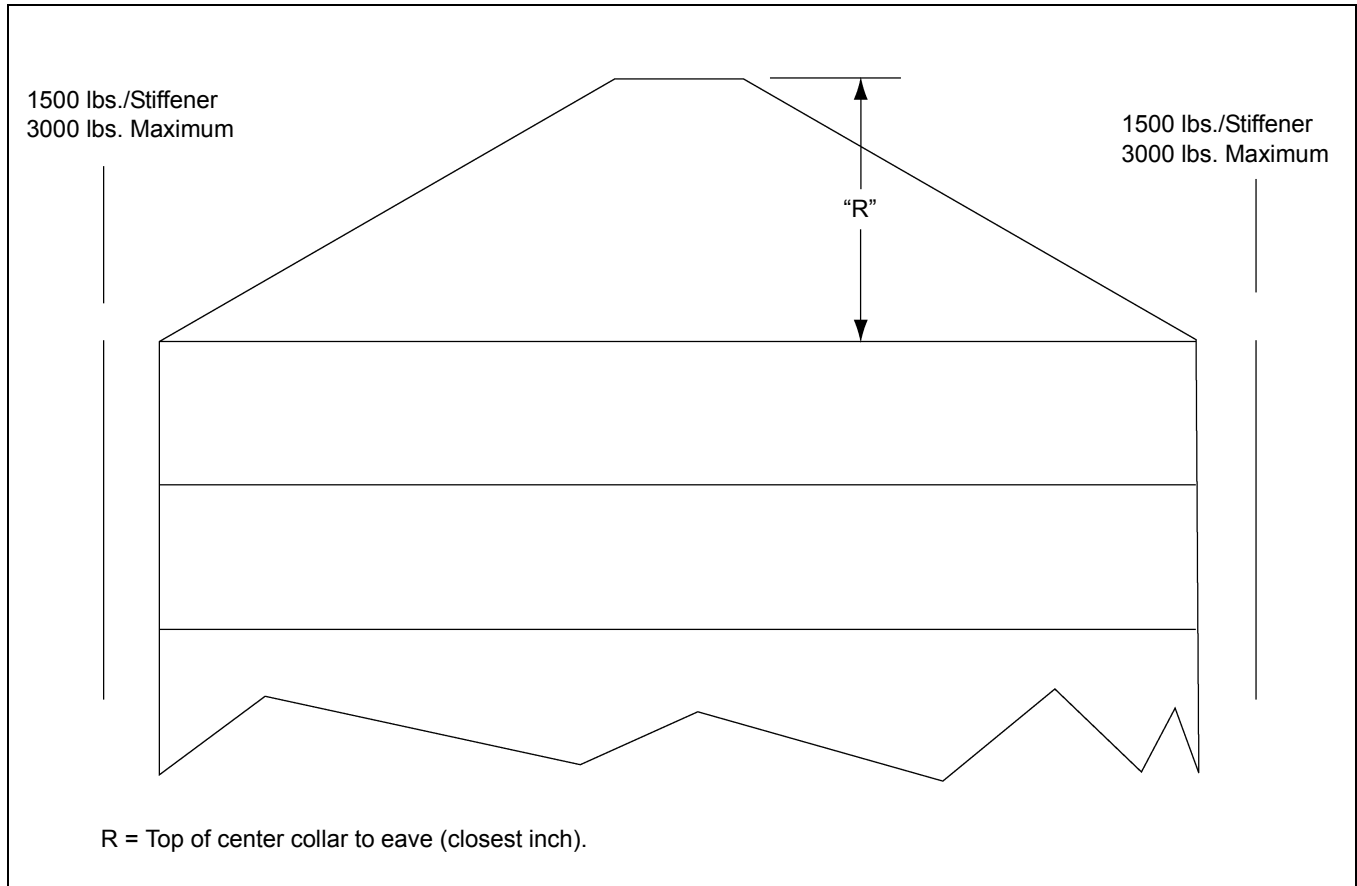


Figure 2

Diameter	Dimension "R"
	Height
36'	9'-2" (279.4 cm)
42'	10'-11" (332.74 cm)
48'	12'-8" (386.08 cm)
54'	13'-11" (424.18 cm)
60'	15'-8" (477.52 cm)
72'	18'-0.4" (549.65 cm)
75'	18'-11" (576.58 cm)
78'	19'-9" (601.98 cm)
90'	23'-4" (711.20 cm)
105'	27'-8" (843.28 cm)

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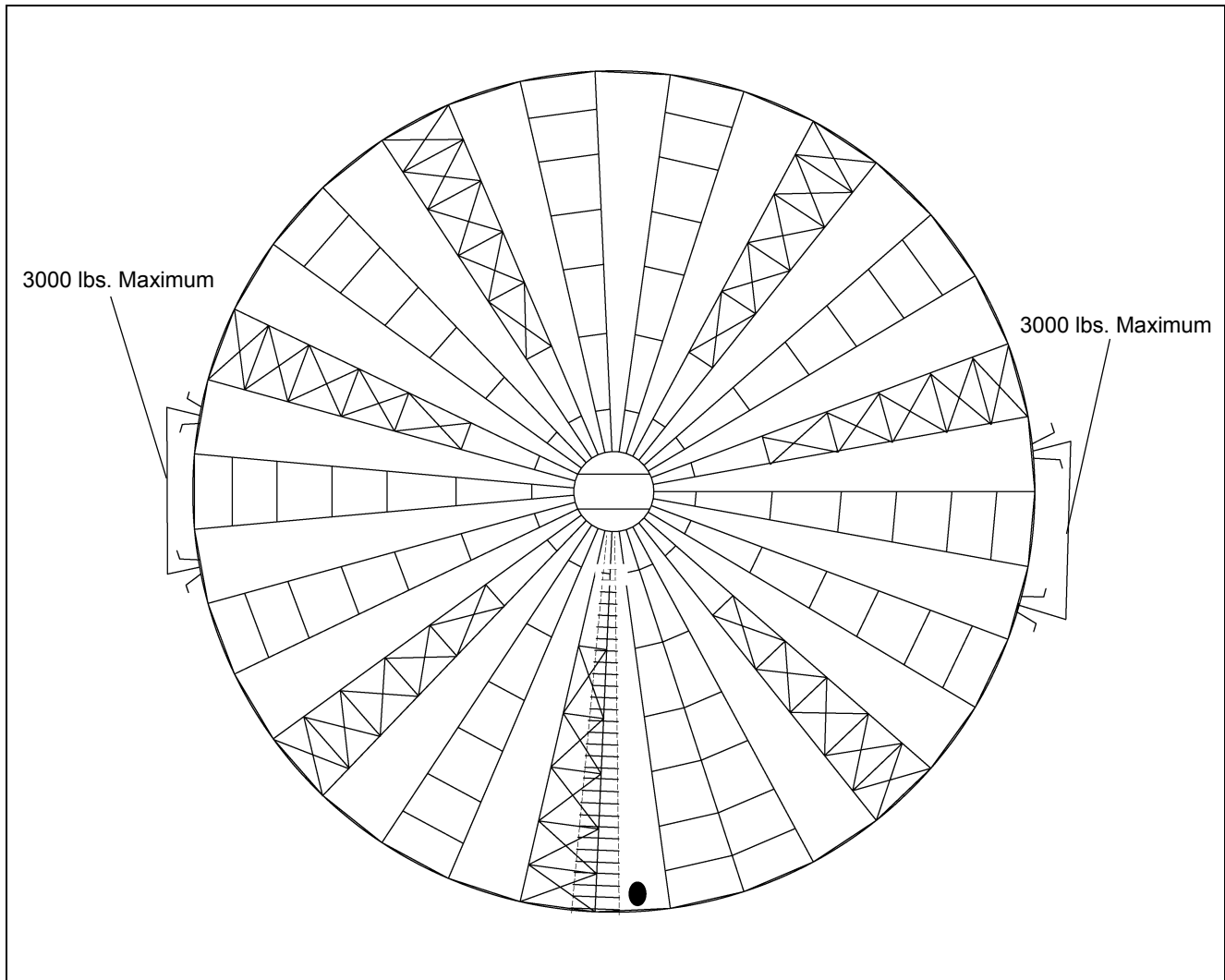


Figure 3 Externally Stiffened

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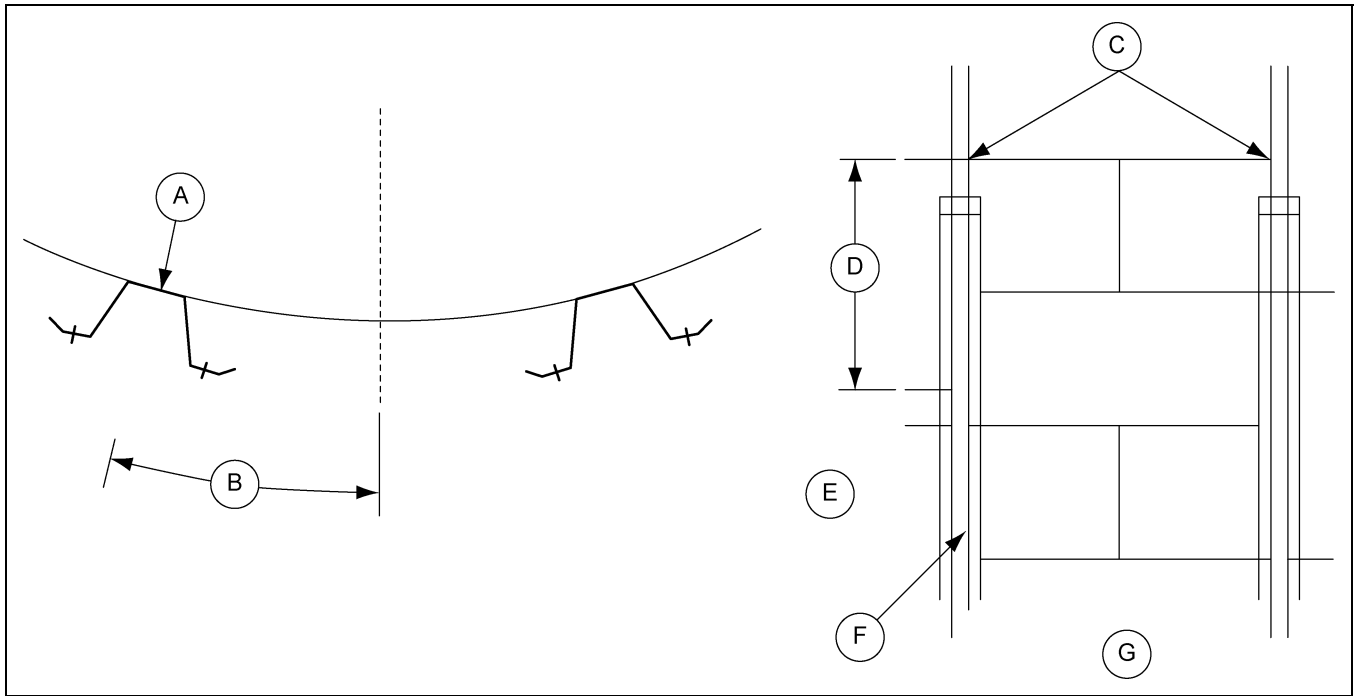


Figure 4

Ref #	Description
A	Outside Radius
B	Angle "A"
C	3000 lbs. Maximum
D	62" Minimum Connection Length

Ref #	Description
E	8" Maximum Bolt Spacing
F	Stiffener Columns
G	Externally Stiffened

Tank Diameter	Outside Radius	2 Post Angle "A"	3 Post Angle "A"
36'	17'-11.11" (546.7 cm)	7.50°	5.00°
42'	20'-10.67" (637.3 cm)	6.43°	4.29°
48'	23'-10.47" (728.4 cm)	5.63°	3.75°
54'	26'-10.47" (819.1 cm)	5.00°	3.33°
60'	29'-10.10" (909.6 cm)	4.50°	3.00°
72'	35'-9.71" (1091.5 cm)	-	2.50°
75'	37'-3.62" (1137 cm)	-	2.40°
78'	38'-9.52" (1182.4 cm)	-	2.31°
90'	44'-9.15" (1364.4 cm)	-	2.00°
105'	52'-2.67" (1585 cm)	-	1.71°