

GAZEBO

(12' – 15' – 18' – 21' Diameter)

Set Up and Installation Manual

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Introduction

- The purpose of this manual is to explain the setup, installation, and maintenance of the Gazebo 12', 15', 18', and 21' diameters. It also contains parts lists for reference and ordering replacement parts as needed.
- It is recommended that you read this manual in its entirety for the information available to provide the proper installation, care, and maintenance of the Gazebo 12', 15,' 18', and 21' diameters. The equipment is built to provide many years of dependable service when installed and used properly.
- If you have any further questions, comments, improvements, or suggestions regarding the contents of any of the information provided, please see the contact information below.
- This machine is covered by one or more United States patents. Refer to www.siouxsteel.com for current patent information. Or scan this QR Code to go directly to the Sioux Steel website.



WARNING! *It is recommended that you read this manual in its entirety for the information available to provide the proper installation, care, and maintenance of the Gazebo 12', 15,' 18', and 21' diameters. The equipment is built to provide many years of dependable service when installed and used properly.*



IMPORTANT! *Improper Site Preparation, Assembly and Maintenance of the Gazebo may invalidate the warranty and cause unnecessary and costly mistakes.*

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Table of Contents

Introduction to Manual	
Limited Rights Data	2
Contact Us Information	2
Chapter 1 – Introduction to Using this Manual	
What this Manual Contains	4
How to Use this Manual	4
Chapter 2 – Safety Instructions	
Introduction to Safety Section	5
Safety Definitions	5
Safety Statements	5
Chapter 3 – Component Descriptions & Specifications	
Features	6
Gazebo Sizes	6
Major Components	7
Chapter 4 – Set Up and Installation Instructions	
General Assembly Information	8
Gazebo Foundation	9
Foundation and Anchoring Details	10
Center Collar Support	12
Gazebo Assembly Tips	13
Assemble Top Tier Side Panels	14
Torque Chart	15
Install Roof Kit	16
Fill Cap Installation	18
Raise Up Assembly and Install onto Anchors	19
Optional 1 st Tier Side Wall Sheets	20
Chapter 5 – Maintenance Instructions	
Instructions	21
Chapter 6 – Lifting Gazebo Instructions	
Maintenance Lifting Instructions	22
Chapter 7 – Exploded Views & Parts Lists	
Gazebo 12' Diameter	25
Gazebo 15' Diameter	26
Gazebo 18' Diameter	27
Gazebo 21' Diameter	28



Chapter 1 – Introduction to Using this Manual

General Description

This manual is a reference for the Gazebo 12', 15', 18', 21' diameters. It is designed to provide clear and simple explanations of safety, set up and installation procedures.

What this Manual Contains:

Chapter 1 – Introduction to Using this Manual: Provides an overview of this manual.

Chapter 2 – Safety Instructions: Contains safety guidelines for set up and installation of the Gazebo 12', 15', 18', 21' diameters.

Chapter 3 – Component Description & Specifications: Provides a description of major components and lists miscellaneous specifications of the Gazebo 12', 15', 18', 21' diameters.

Chapter 4 – Set Up and Installation: Provides step by step instructions on the set up and installation of the Gazebo 12', 15', 18', 21' diameters.

Chapter 5 – Maintenance Instructions: Contains information on maintenance of the Gazebo 12', 15', 18', 21' diameters.

Chapter 6 – Exploded Views and Parts Lists: Displays exploded views and parts lists on all the Components of the Gazebo 12', 15', 18', 21' diameters.

How to Use this Manual

There are three ways to find information in this manual:

- The Header at the top of each page contains the page number.
- The Footer at the bottom of each page contains the chapter name.
- The Table of Contents lists the chapters, sections, and page numbers of the manual.

Chapter 2 – Safety Instructions

This chapter contains safety guidelines for set up, assembly and installation of the Gazebo 12', 15', 18', 21' diameters. It describes the safety instructions included throughout this manual, lists safe practices to observe when setting up the Gazebo 12', 15', 18', 21' diameters.

You must read this chapter before attempting to set up the Gazebo.

INTRODUCTION TO SAFETY SECTION

SAFETY DEFINITIONS:



CAUTION: Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.



WARNING: Indicates a hazardous situation, which, if avoided, could result in death or serious injury.



DANGER: Indicates a hazardous situation, which, if not avoided, will result in death or serious injury.

MORE SAFETY STATEMENTS:



READ AND UNDERSTAND THIS MANUAL COMPLETELY BEFORE ATTEMPTING TO SET UP AND ASSEMBLE THE GAZEBO. FAILURE TO PROPERLY SET UP AND ASSEMBLE THE GAZEBO COULD RESULT IN SERIOUS INJURY OR DEATH TO THE INSTALLERS OR BYSTANDERS.



WATCH FOR THIS SYMBOL. IT POINTS OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS "ATTENTION – BE ALERT! YOUR SAFETY IS INVOLVED." FAILURE TO DO SO MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.



IMPORTANT! It is your responsibility as an owner, operator, or supervisor to know what hazards exist and to make them known to all other personnel working in the area, so that they too may take any necessary safety precautions that may be required.



CAUTION: Failure to properly torque all fasteners may result in structural damage to this Gazebo.



CAUTION: Under no condition shall any other bolts, screws, fasteners, or anchor bolts be substituted for those supplied by Sioux Steel.



IMPORTANT! All bolts, furnished with a neoprene backed washer, must not be tightened, or spun by the bolt head. Always tighten bolts by spinning the nut. Failure to do so will damage the neoprene seal and render the sealing qualities of the washer useless.



All foundation specifications used in this manual are for estimating purposes only. Because of many varying conditions in actual installation, Sioux Steel Company assumes no liability for any results arising from the use of these stated specifications. Consult a professional engineer for a foundation designed for your conditions.

Chapter 3 – Overview, Component Descriptions & Specifications

This chapter contains descriptions and specifications for the major components of the Gazebo 12', 15', 18', 21' diameters.

INTRODUCTION

Sioux Steel Grain Bin Gazebos are the perfect addition to any backyard! With multiple sizes to choose from, there is something for every outdoor space. Enjoy entertaining and the outdoors in your custom gazebo.

FEATURES:

- 4" Corrugated galvanized wall steel.
- Wall sheets and stiffeners are manufactured with 70,000 psi tensile strength steel.
- 30-Degree Roof Slopes – Sheds moisture fast off roof panels.
- 4" Roof Ribs- make the bin roof more resistant to high winds and larger snow loads.

MULTIPLE SIZES TO CHOOSE FROM:

- 12' Diameter Gazebo
- 15' Diameter Gazebo
- 18' Diameter Gazebo
- 21' Diameter Gazebo



Fig. 3-1: 12' Diameter Gazebo



Fig. 3-2: 15' Diameter Gazebo



Fig. 3-3: 18' Diameter Gazebo



Fig. 3-4: 21' Diameter Gazebo

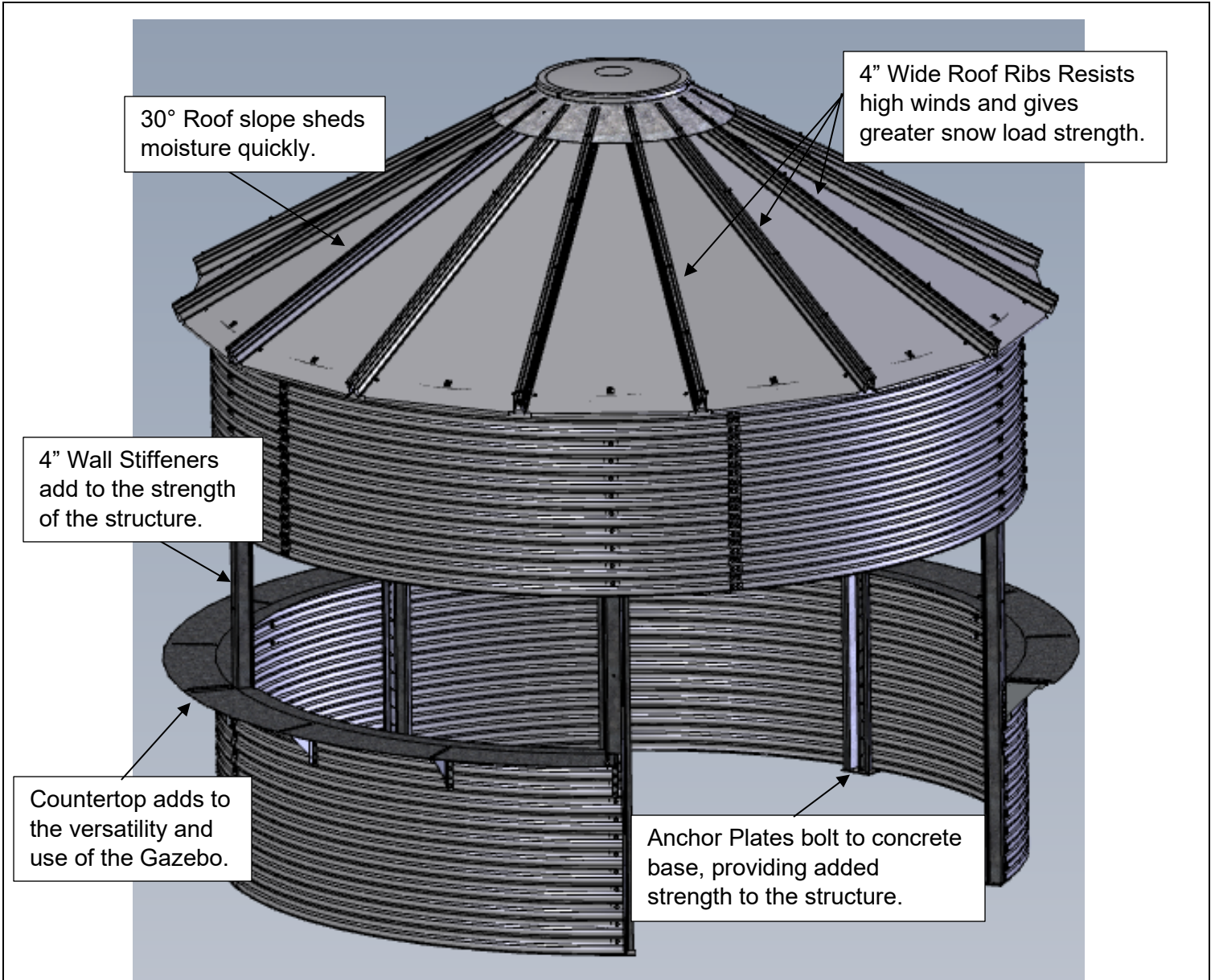


Figure 3-5: Major Components of the Gazebo

SPECIFICATIONS

Available diameters	12', 15', 18' 21'
Wall sheet material.....	Galvanized corrugated strength steel
Wall sheet tensile strength.....	70,000 psi tensile strength
Wall stiffeners.....	4" steel – 70,000 psi tensile strength
Roof slope	30°
Roof ribs.....	4" steel
Foundation Specifications	Concrete Slab: Minimum 4" thick
(Refer to pages 4-9 for additional foundation specifications and recommendations.)	Footings: Minimum 16" W x 16" D
	Slab Footings: 4,000 psi compressive footing depth per local strength codes
	Slab Rebar: #4 rebar 16" on center each way
	Footings Rebar: #4 rebar in bottom of thickened edge. Rebar must be equal to ASTM AG15 GR 40 psi.
	Soil: Undisturbed or well-engineered 2,500 psi minimum soil bearing capacity



Chapter 4 – Set Up, Assembly & Installation Instructions

This chapter contains set up and installation instructions for the Gazebo 12', 15', 18', 21' diameters.

IMPORTANT ASSEMBLY INFORMATION

1. CHECK SHIPMENT

At time of delivery, be sure to check all bundles and parts for proper quantity and condition. Instructions at time of delivery, refer to the exploded views and parts lists located in the back of this manual. If a shortage or damage has occurred, do not accept delivery without making note on the freight bill or delivery receipt. If shortage or damage is found, notify your carrier immediately, so they can send an inspector to make a formal report. Compliance with the carrier's procedure is essential for settlement of claim as the company's responsibility ends when carrier receives shipment.

2. HELPFUL INSTALLATION TIPS

To facilitate assembly, it is advised that you:

- A. Retain your loading list, it will assist you in set up and installation of the Gazebo. It will help you identify parts and tell how many are needed.
- B. Save yourself time by reading the instructions. Read all instructions completely.
- C. Keep this manual handy during set up and assembly and for future reference or necessary parts identification.
- D. Have the proper tools and equipment available to complete the installation.
- E. Arrange parts in sequence.
- F. Do not permit moisture to form between sheets stored outside. If moisture is present, dry at once.
- G. When choosing a site for the bin, be sure to consider accessibility, relation to other structures, as well as power requirements for erection.

3. GENERAL STEP BY STEP PROCEDURES

To assist in the planning, assembly and use of your bin, a general procedure is given below. This procedure is a guide only and may vary according to your specific requirements.

1. Understand and be prepared to follow the limitations for the use of your specific Gazebo.
2. Carefully read and understand this set up and installation manual supplied with your Gazebo.
3. Consider site requirements.
4. Select an adequate foundation design, prepare site, and construct foundation. You must set up and install your Gazebo on a cement foundation per the instructions in this manual.
5. Obtain the necessary assembly equipment and tools.
6. Assemble the upper tier of side wall sheets.
7. Assemble the roof.
8. Assemble the optional lower tier of side wall sheets.
9. Anchor the Gazebo to the foundation.

Foundation for the Gazebo

In all cases, the soil and foundation must be sufficiently stable and deemed suitable to support the forces produced by the structure. **It is recommended that the customer consult a qualified engineer to certify the soil conditions and foundation design for their location.**

Site Selection for the Gazebo

The installation site must be sufficiently level to permit uniform wall assembly on a support foundation. The site must be on flat ground and reasonably level to avoid standing water and erosion problems. In all cases, the area surrounding the Gazebo must provide sufficient drainage to prevent soil erosion around the foundation.

Soil Analysis and Preparation

Soil under and around the foundation footings and slab must be undisturbed or well-engineered compacted back-fill which will provide a minimum soil bearing capacity of 2,500 lbs. per square foot. Consult local engineers regarding permissible soil loading at the site. In addition, sufficient soil borings should be taken at the site by qualified persons to ensure adequate soil bearing capacity.

Concrete Requirements

The concrete used in these designs is to have an ultimate compressive strength at 28 days of 4,000 lbs. per square inch minimum for the slab, and 4,000 lbs. per square inch minimum for the footings. The concrete slab must at least be 4" thick. The foundation **MUST** be poured level where the wall will rest to prevent uneven loads on the wall sheets. The slab should be slightly crowned for moisture control. Never allow the slab to "slope in" from the side walls, as moisture collection problems will result. Footing depth should be below the frost line, and a minimum of 16" W x 16" D. Check the requirements in your locality and if necessary, increase the depth given in the foundation dimension schedule for your specific model Gazebo. Be certain that all anchors are accurately and evenly installed to insure wall roundness. All anchors must be concentric with the foundation footing. Never allow foundation penetrations to pass through or interfere with anchor locations. Do not install less than the specified number of anchors for your Gazebo. See Fig. 4-4.

Concrete Reinforcing Requirements

Rebar splice length must be 16" minimum. Stagger splices with no more than half the re-bar splice at the same point. Reinforcing (rebar) steel must be equal to ASTM A615 GR 40 KSI. See Fig. 4-4 for more information.

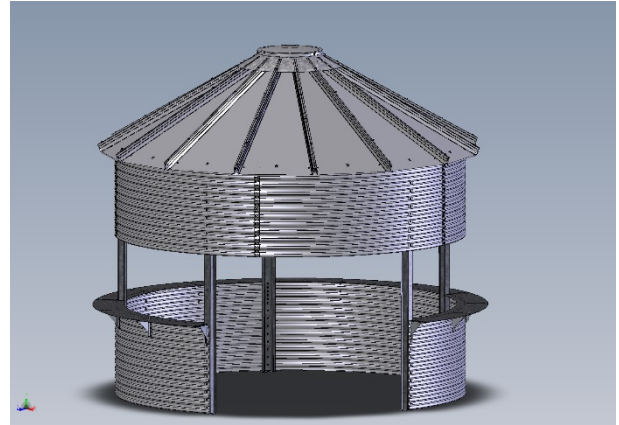


Fig. 4-1: The Gazebo must be build on stable soil conditions and a concrete foundation.



All foundation specifications used in this manual are for estimating purposes only. Because of many varying conditions in actual installation, Sioux Steel Company assumes no liability for any results arising from the use of these stated specifications. Consult a professional engineer for a foundation designed for your conditions.



Contact your insurance agent prior to installation to insure you are covered in case of inadvertent accidents that may occur during assembly.

NOTE: Sioux Steel Company is not responsible or liable for:

- Any damage or failure that may occur due to incorrect assembly of the structure.
- Any soil analysis or foundation design.
- Substitution of components not specified in this installation manual that led to damage or failure.
- Unstable soil conditions or foundation that led to structure damage or failure.
- Damage caused by leaning sidewalls.
- Any modification of design or structure.
- Any bodily injury that occurs during the assembly of the structure or because of modification to the design or improper construction.
- Caustic or corrosive environments that lead to structure deterioration, damage or failure.

FOUNDATION AND ANCHORING DETAILS

The foundation design is to be completed by a qualified engineer. The minimum slab thickness should be 4 in. See Fig. 4-4. The thickened edge should be a minimum of 16" wide and 16" deep. See Fig. 4-4 and refer to foundation, soil and concrete requirements on page 9.

Anchor bolts can be embedded in the concrete foundation at the time the foundation is being poured. Refer to the anchor bolt locations shown in Figures 4-5 thru 4-8 on page 11.

Most installers wait until after the top tier side walls, roof and stiffeners have been assembled. Then drill in the anchor bolts at that time. See Fig. 4-3 A, B, C.

The 3/4" diameter anchor bolts can be purchased from Sioux Steel, part No. S192808 (or Epoxy S178235) or purchased locally. See Fig. 4-3.

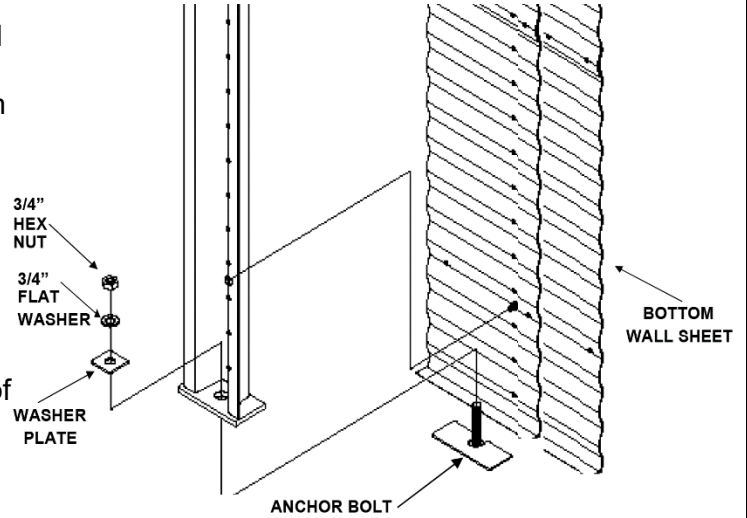


Fig.4-2: Anchor with Stiffener

EPOXY ANCHOR BOLT DETAILS

1. Using a rotary hammer drill and drill anchor holes as specified in drawings. See Fig. 4-3 A, B, C.
2. Using compressed air and a brush, clean holes of all dust, slurry, and all foreign matter.
3. Set steel threaded rod in hole and check to see if the projection above surface is 2 1/2". See Fig. 4-3 A, B, C.
4. Inject epoxy starting from the bottom of hole, filling to a minimum of 1/2 full. See Fig. 4-3 C.
5. Insert threaded rod into hole. See Fig. 4-3 A, B, C.
6. Twist rod in hole to ensure full coverage of epoxy on threads. See Fig. 4-3 C.
7. Consult directions of epoxy for cure time. Allow to cure.

NOTE: It is required that all anchor bolts be installed per specifications shown on the following page. Anchor locations should be marked out prior to erecting Gazebo to assure roundness of Gazebo. Anchor bolts are never to be excluded.

When considering the drill-in / epoxy anchor details, a good quality 2-part epoxy must be utilized that is made for concrete to steel adhesion.

Material properties for cured adhesive are as follows:

- Compressive Strength – 10,440 psi
- Tensile Strength – 1,740 psi

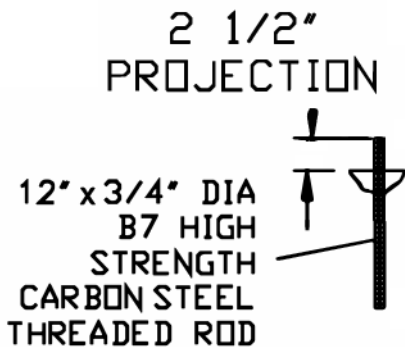


Fig. 4-3 A: Anchor Bolt Projections

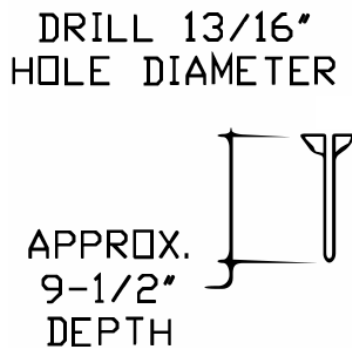


Fig. 4-3 B: Drill Anchor Bolts

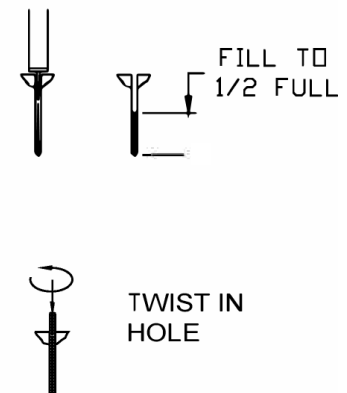
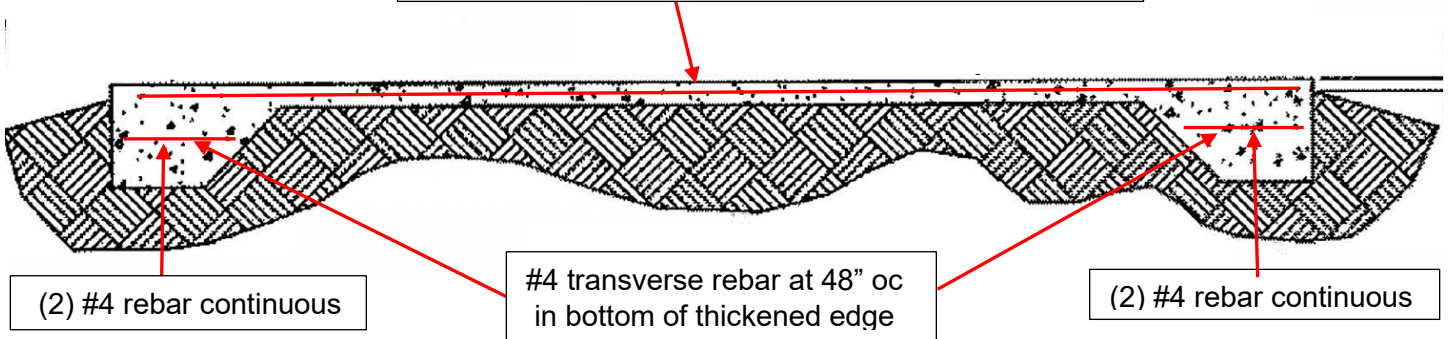


Fig. 4-3 C: Fill Anchor Bolt Holes with Epoxy and Install All Anchor Bolts

Slope grade line away from foundation for proper water drainage

The slab should be a minimum of 4" thick and the thickened edge should be a minimum of 16" wide and 16" deep

#4 rebar at 16" oc each way in slab; centered in slab



(2) #4 rebar continuous

#4 transverse rebar at 48" oc in bottom of thickened edge

(2) #4 rebar continuous

Fig. 4-4: Slab Foundation

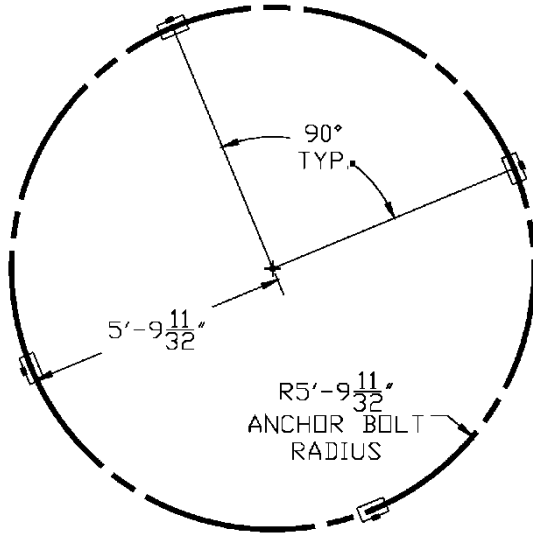


Figure 4-5: 12 FT Anchor Bolt Layout

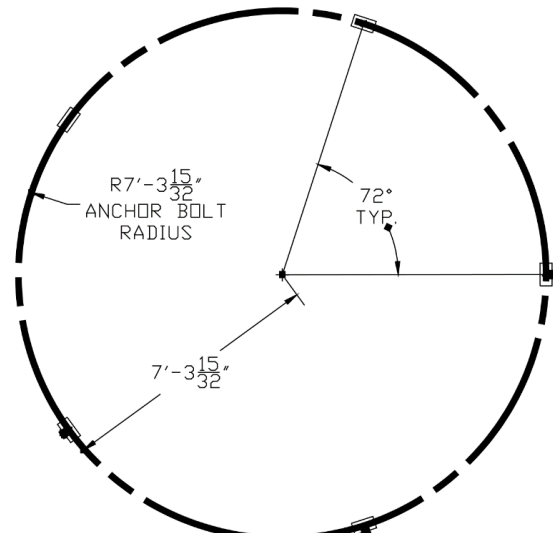


Figure 4-6: 15 FT Anchor Bolt Layout

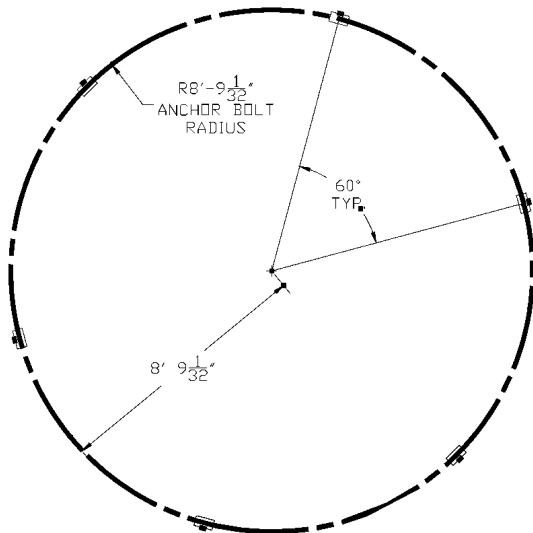


Figure 4-7: 18 FT Anchor Bolt Layout

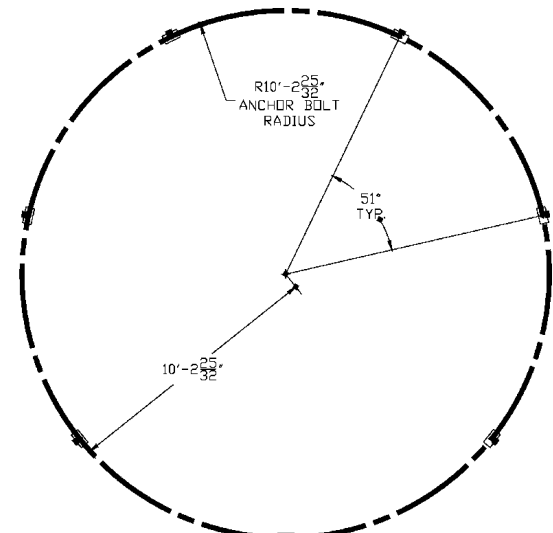


Figure 4-8: 21 FT Anchor Bolt Layout

CENTER COLLAR SUPPORT

A center support collar (See Fig. 4-9) is required to lift the assembled roof kit and upper tier side walls into position. The support shown in Figure 4-9 is only a representation.

Center Collar Supports are available for sale or rental through other sources.

IMPORTANT! The center support collar represented in Fig. 4-9 is common for 12' through 21' diameter roofs. The support must be designed to carry the dead and live loads of the structure during construction.

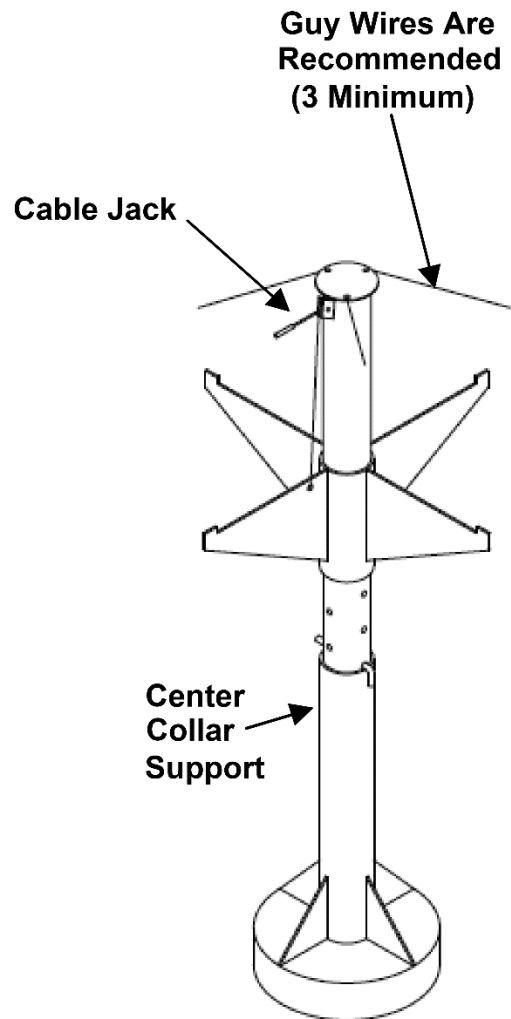


Figure 4-9: Center Collar Support



CAUTION: Improper design and use of collar support may result in damage to the roof and personal injury.

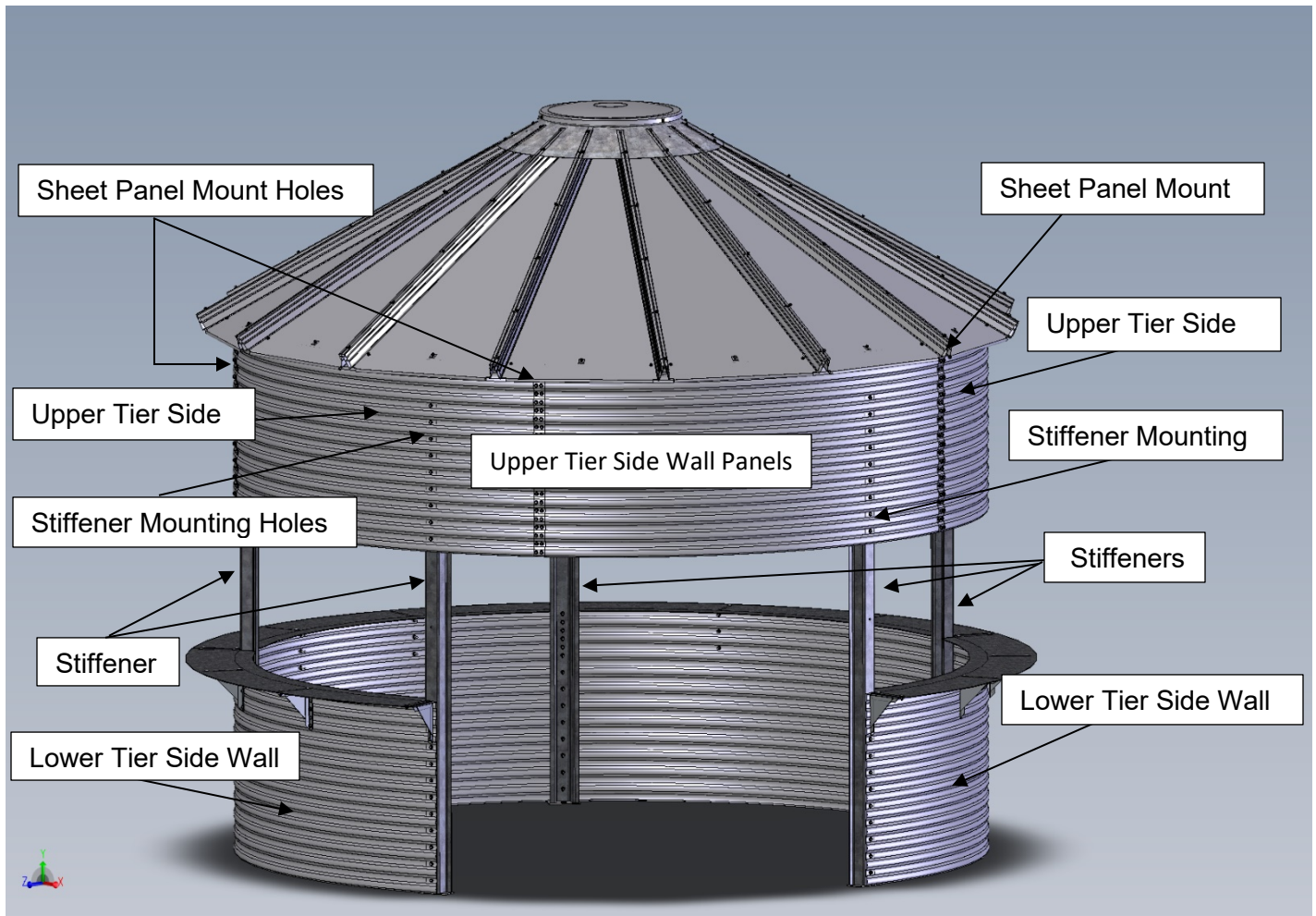


Figure 4-12: 15' Gazebo - Part No. 226004

GAZEBO ASSEMBLY TIPS

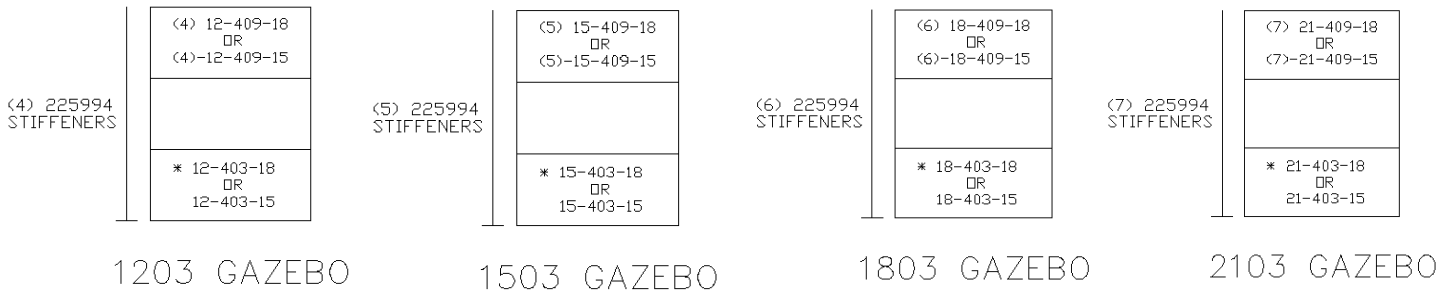
It is recommended to review the above drawing and the assembly tips below and learn part names before beginning the installation. This will speed installation and prevent assembly errors.

1. Note how the upper tier side panels are overlapped on the ends when assembled.
See Fig. 4-12.
2. Note how the wall stiffeners are assembled to the single row of bolt holes in each side panel.
See Fig. 4-12.
3. Locate the label on each side panel. The label has the part number and "This Side Up" arrow. The part number and "This Side Up" arrow will come into play later in the instructions.
4. During assembly refer to the exploded views and parts lists in the back of this manual to help you to correctly assemble the Gazebo. See pages 24-28.
5. The Sioux Steel Gazebo is sold in 4 sizes (12', 15', 18', 21' diameters). The installation steps in this manual will show only the 15' diameter option. All diameters are assembled the same.

1. ASSEMBLE TOP TIER SIDE PANELS

2. Assemble the top tier side panels as follows:

3. Place the center collar support in the center of the foundation adjust to comply with dimension A & B in Fig. 4-14. See Fig. 4-14.
4. Lay the top tier panels out on the ground around the foundation. Each panel has a label with its part number and an arrow. The arrow should be pointing up when the panel is installed. Refer to the sheet layout drawing in Fig. 4-13.
5. Note the panels have a two-bolt row going up and down each end of the panel. See Fig. 4-15.
6. Overlap the ends of each panel and connect the panels using the .438 – 14 x 1.50 bolts and .438 – 14 hex nuts provided. See Fig. 4-15.
7. Only finger tighten bolts. Do not over tighten at this time.



* Optional sheets

Figure 4-13: Sheet Layout

BIN DIA	DIM "A"	DIM "B"
12'	6 1/2-1/2"	33"
15'	7'- 4"	33"
18'	8'-2 1/2"	33"
21'	9'-1"	33"

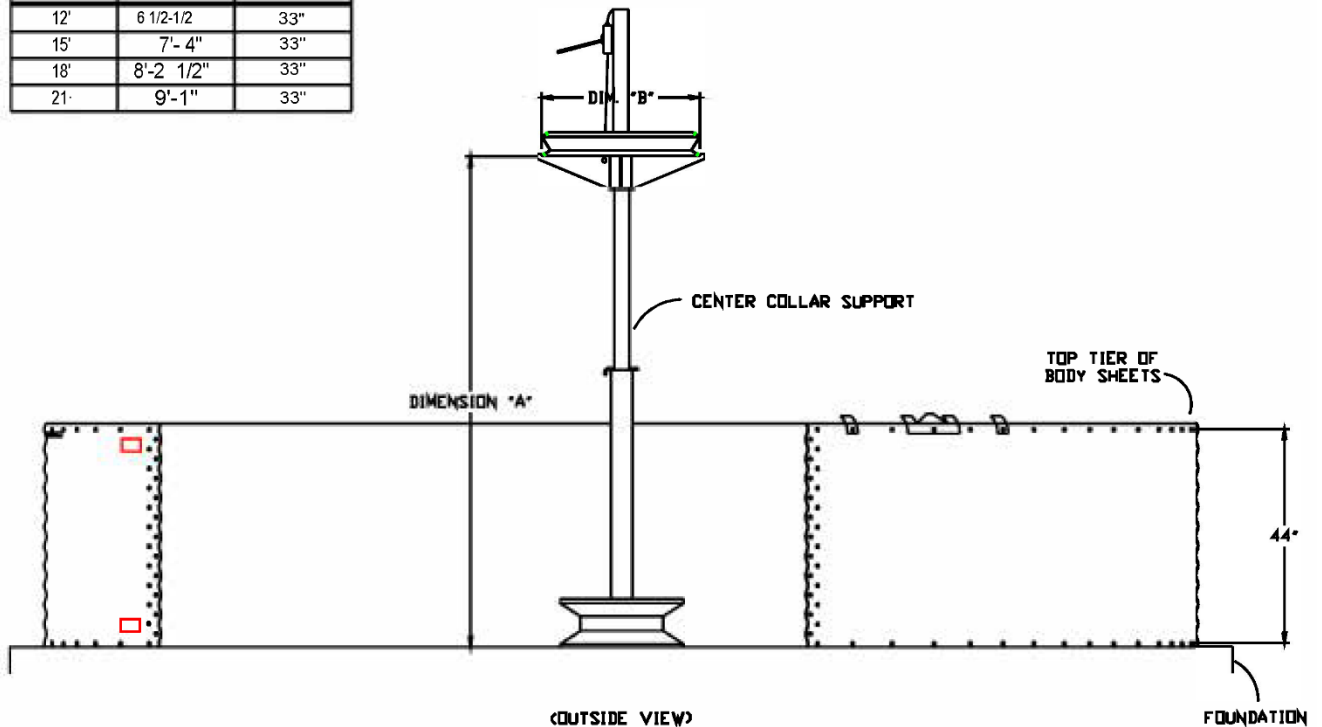


Figure 4-14: Center Support and Top Tier of Side Panels

Chapter 4 – Set Up, Assembly & Installation Instructions

ASSEMBLE TOP TIER SIDE PANELS (continued)

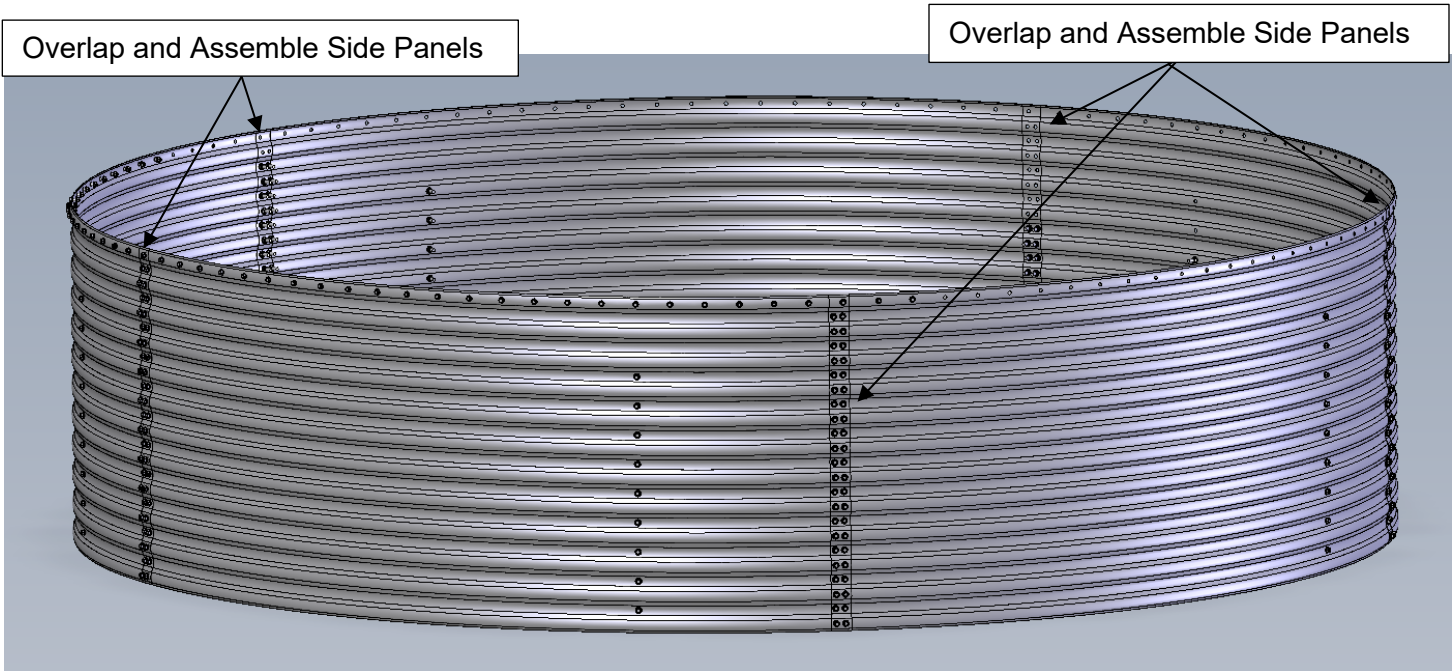



Figure 4-15: Assemble Top Tier Side Panels

 **CAUTION:** Failure to properly torque all fasteners may result in structural damage to this Gazebo.





Torque Requirements

At first, hardware will only be finger tightened. Later in the installation, you will be instructed to torque all hardware to certain torque values. See chart below.

 **CAUTION:** Under no condition shall any other bolts, screws, fasteners, or anchor bolts be substituted for those supplied by Sioux Steel.

BOLT TORQUE VALUES / SPECIFICATIONS

NOTE: ALL VALUES ARE IN FT-LBS TORQUE

Bin Bolt Size	Grade	Use	Pre-set Wrench Torque for (FT-LBS)	Tolerance	
				Min	Max
.375 Bin 16 x 1.00	GR8.2 	Structural fastening, (sidewall)	37	35	40
.438 HH Bin 14 x 1.50	GR8.2 	Structural fastening (sidewall)	47	45	50
.438 CARR -14 x 1.00	GR 5BZ 	Structural fastening (stiffener)	33	30	35
5/16 - 18	GD5 	Structural fastening (roof and side wall)	22	20	25

Chapter 4 – Set Up, Assembly & Installation Instructions

INSTALL ROOF KIT

1. Install roof kit hardware to the top edge of the top tier side panels as shown in Fig. 4-16, 4-17 and 4-18.
2. Install roof clips (#12398) at every 8th hole in top ring. Install three #12328 intermediate roof clips in every other hole between all regular roof clips. Plug all remaining holes with 3/8" x 1" hex bolts w/neoprene washers. See Fig. 4-17.
3. To aid installation, it is suggested that a roof prop be built to hold panels in place on the center support collar.
4. Only finger tighten all bolts until all panels have been installed. Do not over tighten at this time.

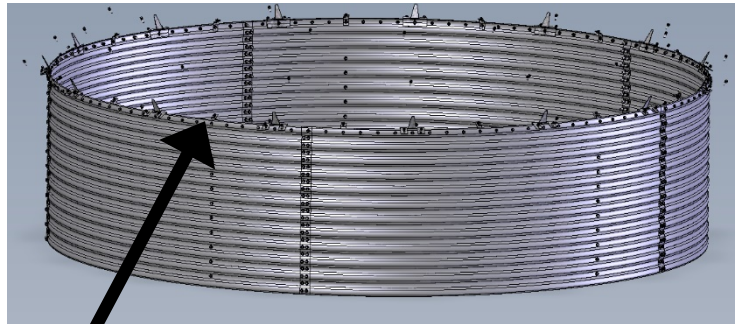


Figure 4-16: Roof Hardware Installed Around Top Edge of Upper Side Wall

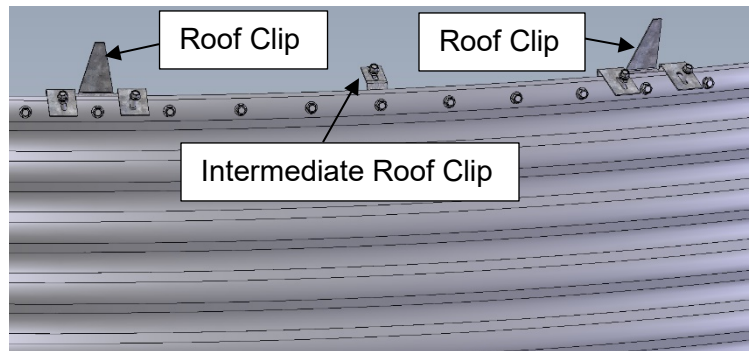


Figure 4-17: Roof Hardware



IMPORTANT! All bolts, furnished with a neoprene backed washer, must not be tightened, or spun by the bolt head. Always tighten bolts by spinning the nut. Failure to do so will damage the neoprene seal and render the sealing qualities of the washer useless.

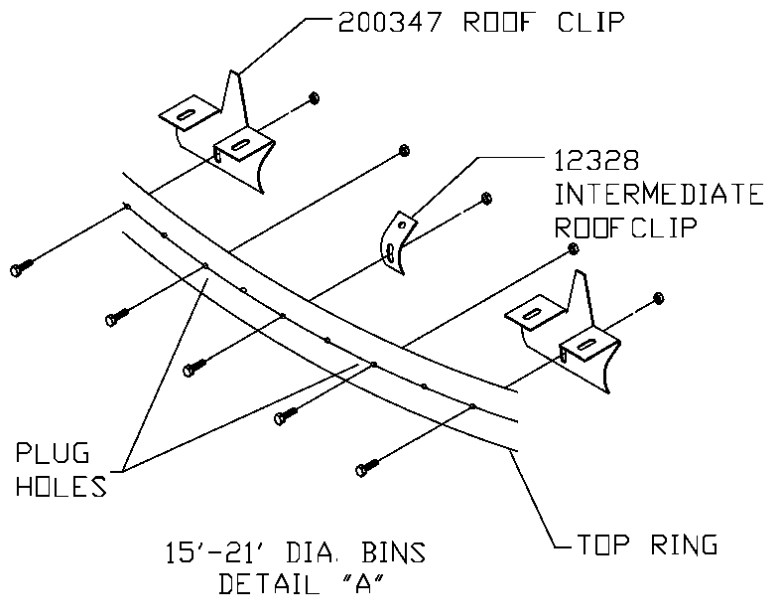


Figure 4-18: Roof Panel Clips

Chapter 4 – Set Up, Assembly & Installation Instructions

INSTALL ROOF KIT (continued)

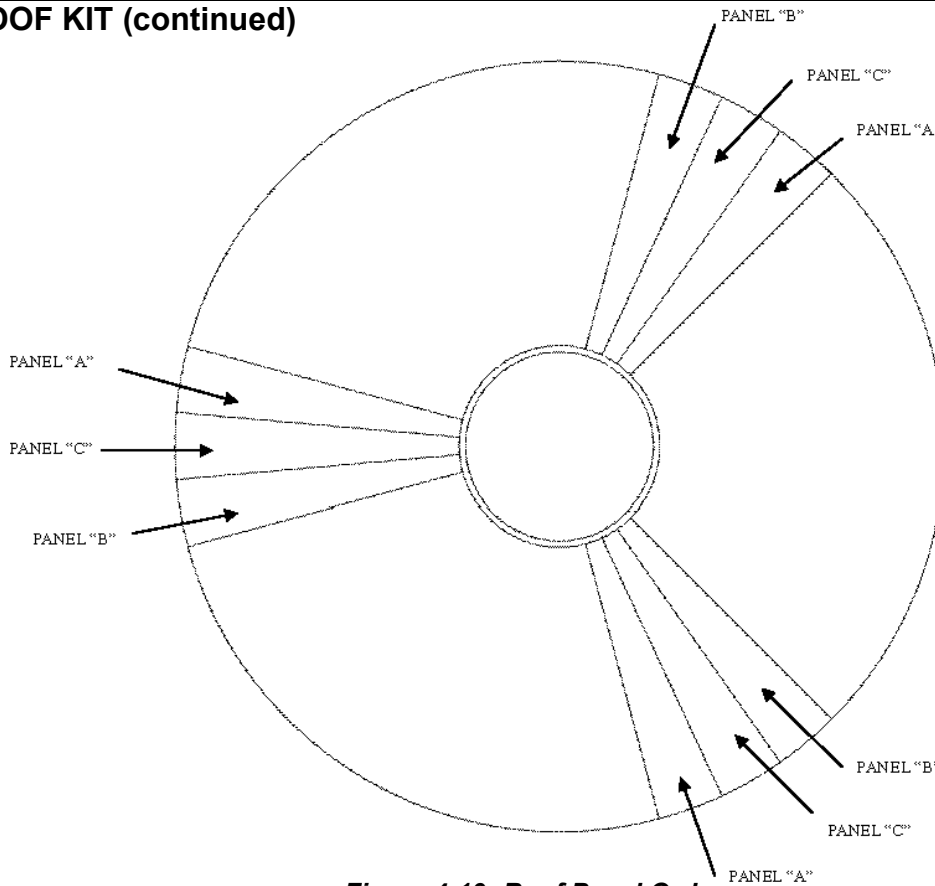


Figure 4-19: Roof Panel Order

ROOF SHEET ASSEMBLY PROCESS:

1. Panel "A" roof sheets should be started at 3 equal locations around collar. See Fig. 4-19.
2. Attach each roof panel to the roof clips as show in Fig. 4-18.
3. Holes will have to be counted to assure equal position of sheets.
4. Panel "B" roof sheets should be installed next.
5. Continue assembling wall sheets in a counter clockwise direction for the rest of the panels.
6. Finger tighten all bolts. Do not over tighten at this time.
7. Install the flashing ring. See Fig. 4-21 and 4-22.

ROOF SHEET

BIN DIA.	PART NO.	NO. REQ'D
12'	225499	16
15'	223863	15
18'	223864	18
21'	223865	21

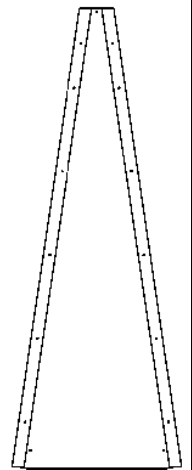


Figure 4-20: Roof Sheets

Flashing Ring

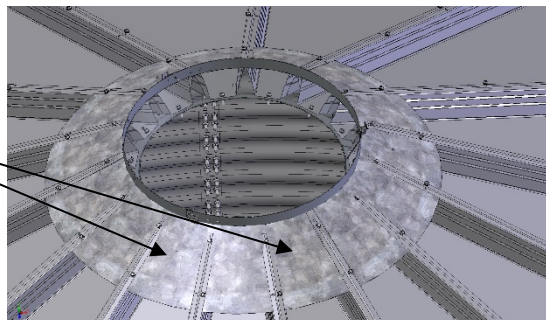


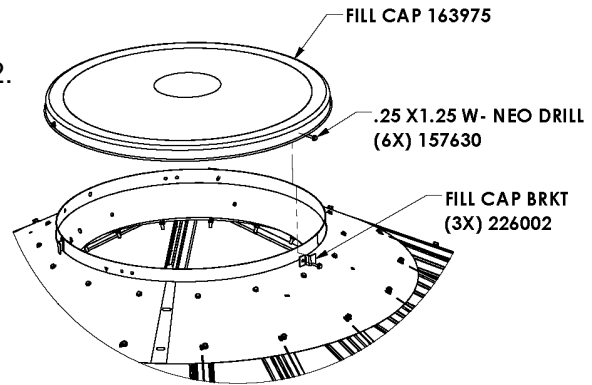
Figure 4-21: Roof Flashing Ring

Chapter 4 – Set Up, Assembly & Installation Instructions

FILL CAP INSTALLATION

Install the fill cap as follows:

1. Install fill cap brackets. See Detail A in Fig. 4-22.
2. Install the fill cap to the flashing ring using the hardware shown in Fig. 4-22.



DETAIL A
FILL CAP INSTALL

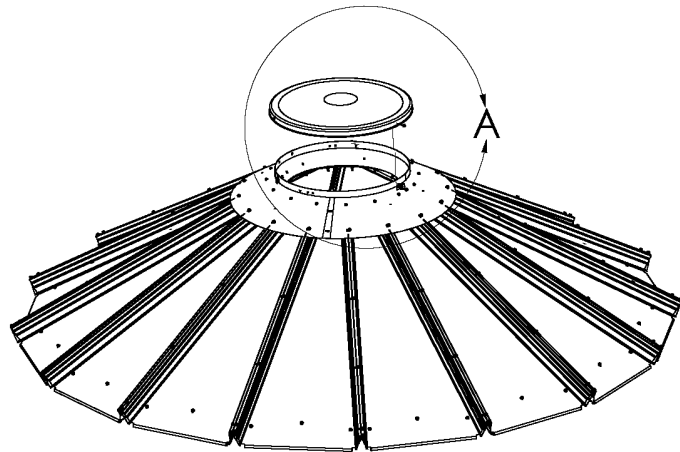


Figure 4-22: Fill Cap Installation

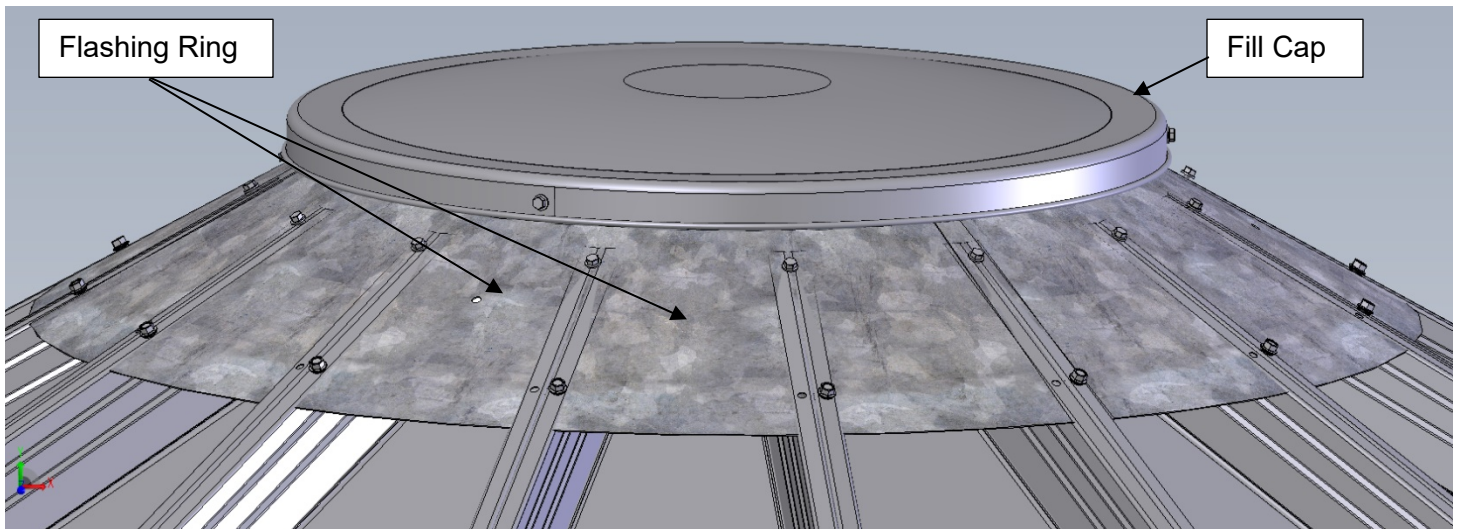


Figure 4-23: Install Roof Cover and Ring

Chapter 4 – Set Up, Assembly & Installation Instructions

RAISE UP ASSEMBLY AND INSTALL ONTO ANCHOR BOLTS

1. Raise up the roof and side panel assembly using the center support assembly.
2. Install the wall stiffeners. See Fig. 4-25.
3. Lower the roof side panel stiffener assembly down over the anchor bolts if installed in foundation earlier in the installation. See Fig. 4-25.
4. If installing anchor bolts now, drill into concrete at each wall stiffener and bolt the stiffeners in place.
5. Finger tighten all hardware. Do not over tighten at this time.

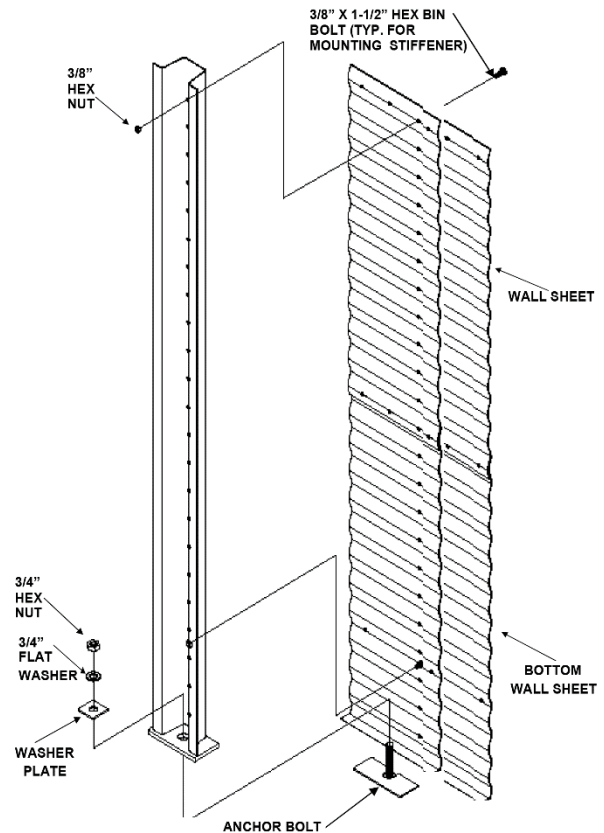


Figure 4-24: Anchor Bolts

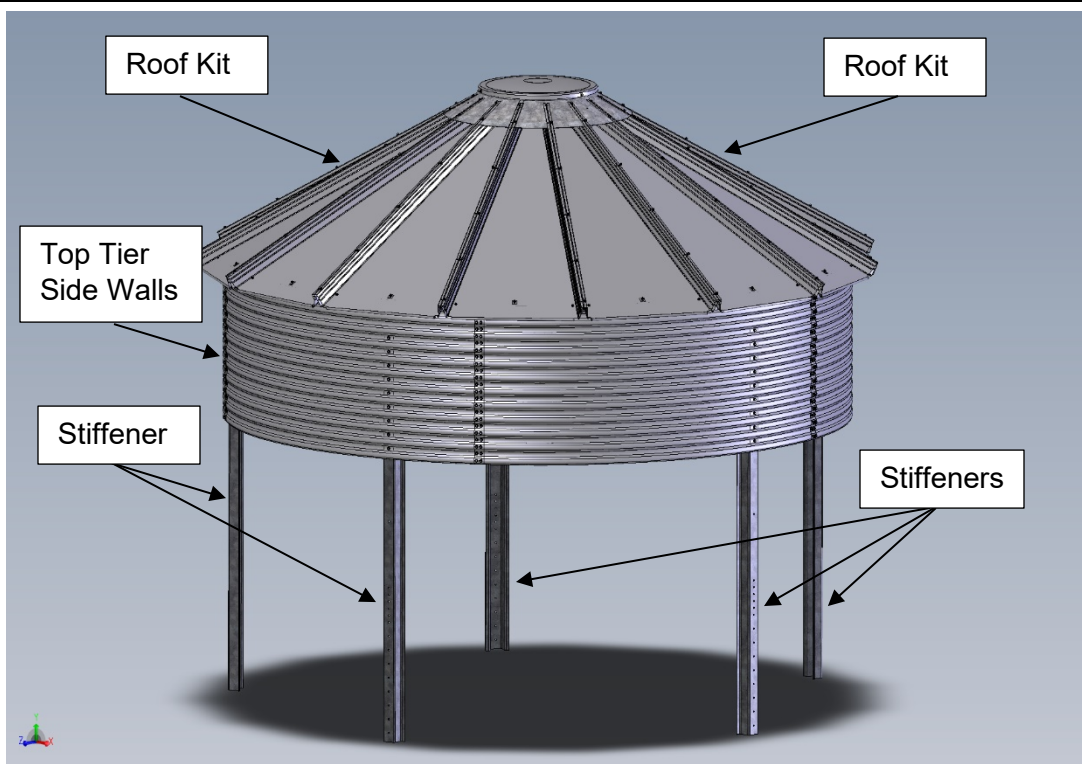


Figure 4-25: Stiffeners Installed on Top Tier Side Walls

Chapter 4 – Set Up, Assembly & Installation Instructions

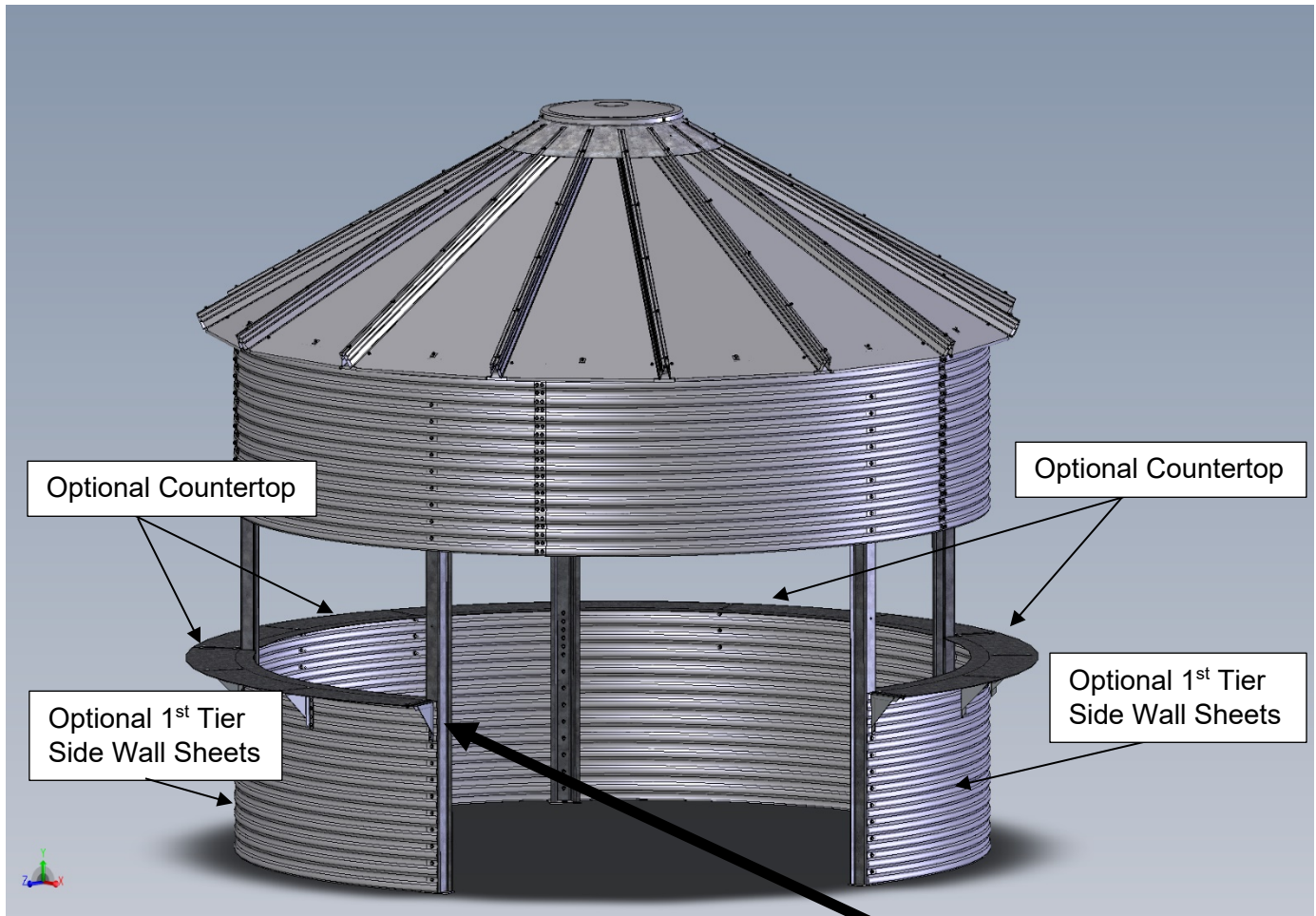


Figure 4-26: Install Optional 1st Tier Side Wall Sheets

INSTALL OPTIONAL 1ST TIER SIDE WALL SHEETS

1. If ordered, install the optional 1st Tier Side Wall Sheets with hardware provided. See Fig. 4-26.
2. Install optional countertop brackets and countertop to 1st tier side wall sheets. See Fig. 4-26.

Firmly tighten all hardware through out the installation, the instructions stated to finger tighten all hardware. Now that the assembly/installation is complete; firmly tighten all hardware per the Torque Chart on page 21.

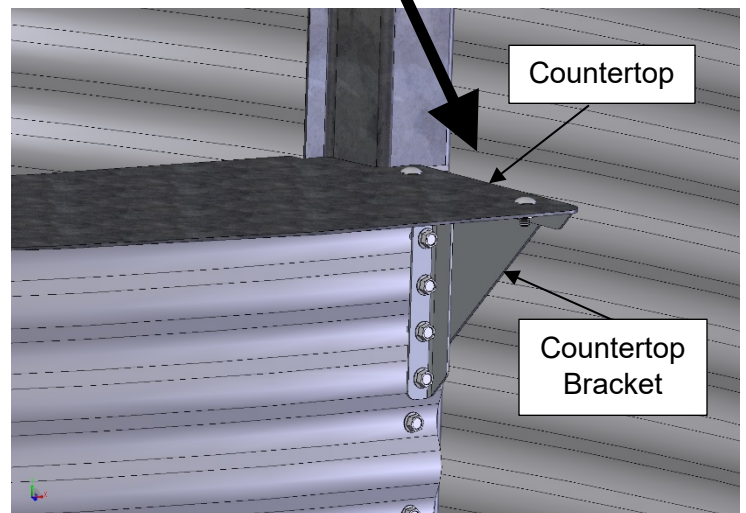


Figure 4-27: Optional Countertop and Brackets

Chapter 4 – Set Up, Assembly & Installation Instructions

Chapter 5 – Maintenance Instructions

This chapter contains instructions for maintenance of the Gazebo 12', 15', 18', 21' diameters.

It is recommended to periodically check the torque values on all installed hardware. This should be completed every 6 months. Refer to the recommended torque values in the Torque Chart below.

BOLT TORQUE VALUES / SPECIFICATIONS

NOTE: ALL VALUES ARE IN FT-LBS TORQUE





Bin Bolt Size	Grade		Use	Pre-set Wrench Torque for (FT-LBS)	Tolerance	
					Min	Max
.375 Bin 16 x 1.00	GR8.2		Structural fastening, (sidewall)	37	35	40
.438 HH Bin 14 x 1.50	GR8.2		Structural fastening (sidewall)	47	45	50
.438 CARR - 14 x 1.00	GR 5BZ		Structural fastening (stiffener)	33	30	35
5/16 - 18	GD5		Structural fastening (roof and side wall)	22	20	25

Figure 5-1: Torque Chart

Chapter 5 – Maintenance Instructions

Chapter 6 – Lifting Gazebo Instructions**RECOMMENDATIONS FOR GAZEBO LIFTING INSTRUCTIONS:**

Recommendations for lifting a completely assembled Gazebo.

(Any and all parts shown or mentioned in this section are not supplied).

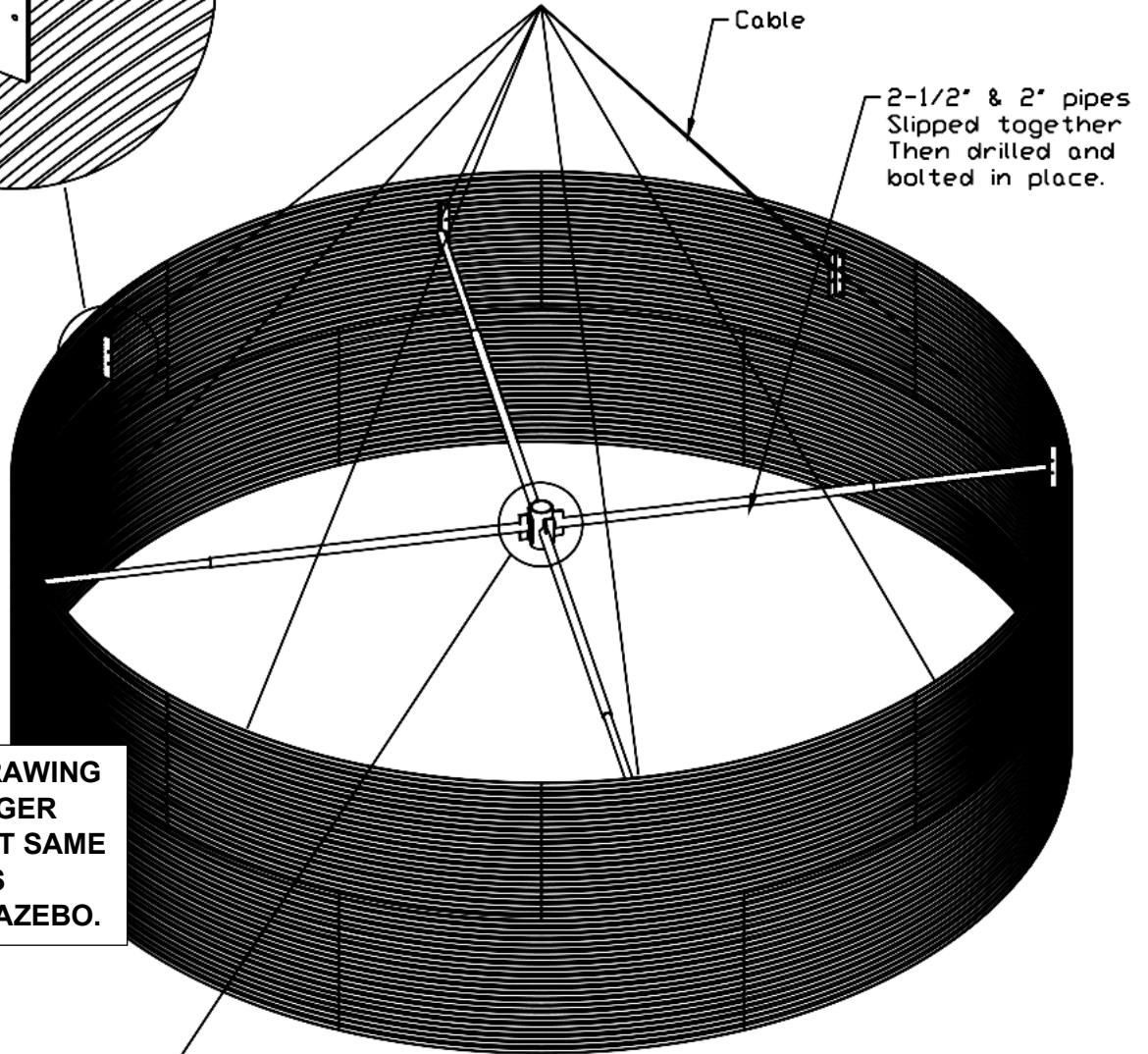
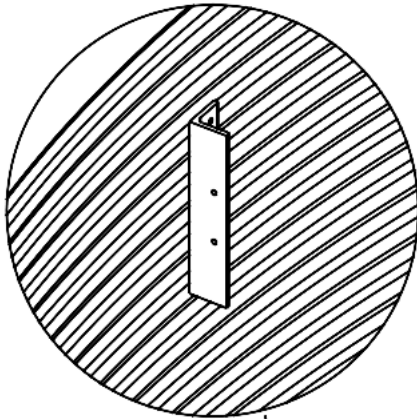
NOTE: Typically, a crane or telehandler is utilized to lift the Gazebo. Techniques of lifting differ in part based on personal experience, equipment, and manpower. Recommendations in this manual are intended only to be a guideline.

Lifting techniques differ largely based on personal experience and equipment capacity, however general recommendations are as follows:

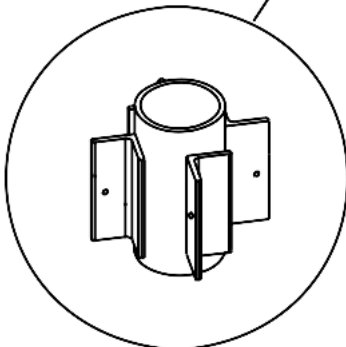
- All lifting brackets should be attached to the stiffeners. See Fig. 6-1. A minimum of one lift bracket per sidewall sheet should be used. Brackets are usually attached in the top ring from the bottom of the Gazebo. Each bracket should be installed with a minimum (4) bolts through the stiffener holes. Remove the center roof cover. Cables can then be attached to brackets and the crane hook which was lowered through the open center ring. Cables must be of adequate size and strength for supporting the specified load. All cables should be of equal length prior to lifting the Gazebo.
- To prevent the assembled tank from being distorted, horizontal bracing is recommended. This may be accomplished by using a center hub and pipe system. See Fig. 6-1. The center hub would be made of 6" schedule 40 pipe with 3" x 3/8" angles welded to it at equal locations around the hub. Holes should be in angles so 2-1/2" pipes can bolt up to it. A second set of smaller 2" pipes would be bolted to the side lift brackets. The 2 sets of tubes would be slipped together then drilled and bolted in place when set correctly. See Fig. 6-1.
- Temporary bracing across the peak ring should be used to guide the cable. This should be made easy to remove once lifting is completed.

Chapter 6 – Lifting Gazebo Instructions

Lift Bracket- Place inside at every other stiffener location around bin (Third ring from bottom).
 Bracket - 3 x 3 x 3/8 angle
 Fasten with minimum (4) 3/8 grade 8 bolts
 Use nuts to fill space voids in corrugation at fastener points between bracket and wall sheet.
 Typ. each location.



NOTE: THIS DRAWING SHOWS A LARGER GRAIN BIN, BUT SAME INSTRUCTIONS APPLY TO A GAZEBO.



Hub Weldment -
 Hub made of 6" sch 40 pipe
 3" x 3" x 3/8" Angles equally arrayed around pipe.

Figure 6-1: Gazebo Lifting Instructions



Chapter 6 – Lifting Gazebo Instructions

Chapter 7 – Exploded Views & Parts Lists

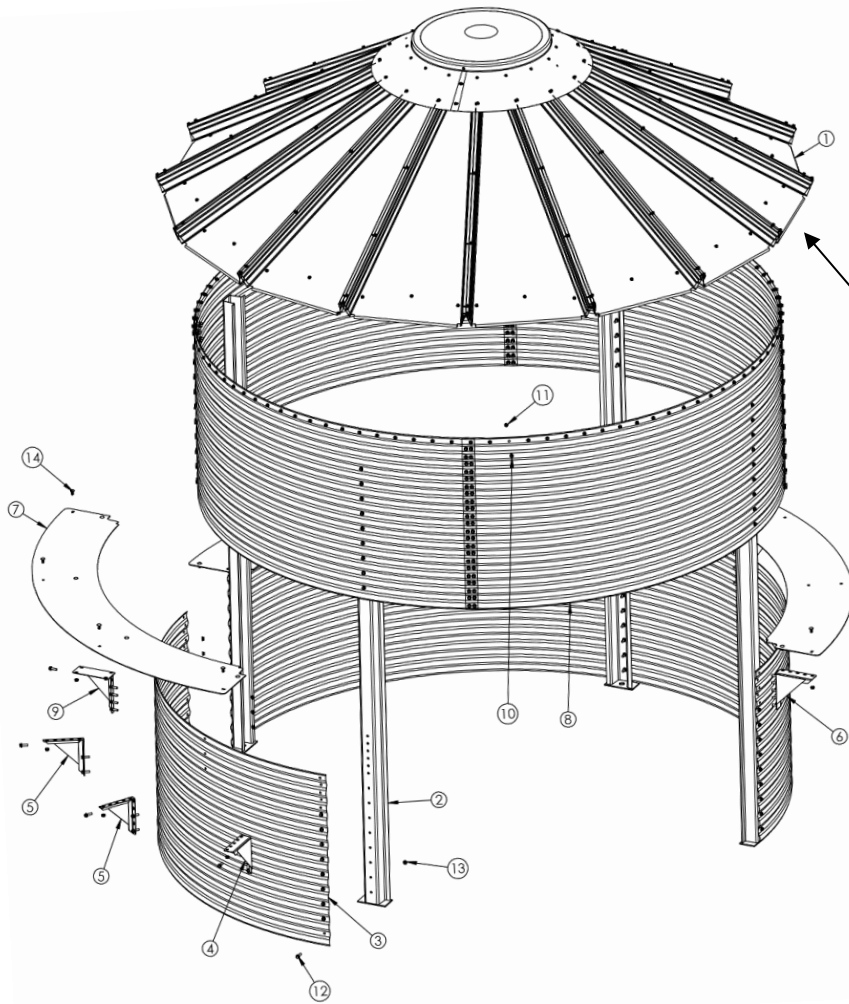
This chapter contains exploded views and parts lists for the Gazebo 12', 15', 18', 21' diameters.

Chapter 7 – Table of Contents

Gazebo 12' Diameter – Model 1203	25
Gazebo 15' Diameter – Model 1503	26
Gazebo 18' Diameter – Model 1803	27
Gazebo 21' Diameter – Model 2103	28

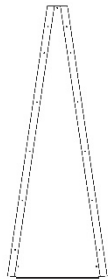
Chapter 7 – Exploded Views & Parts Lists

**Model 1203
Gazebo 12' Diameter**



ROOF SHEET

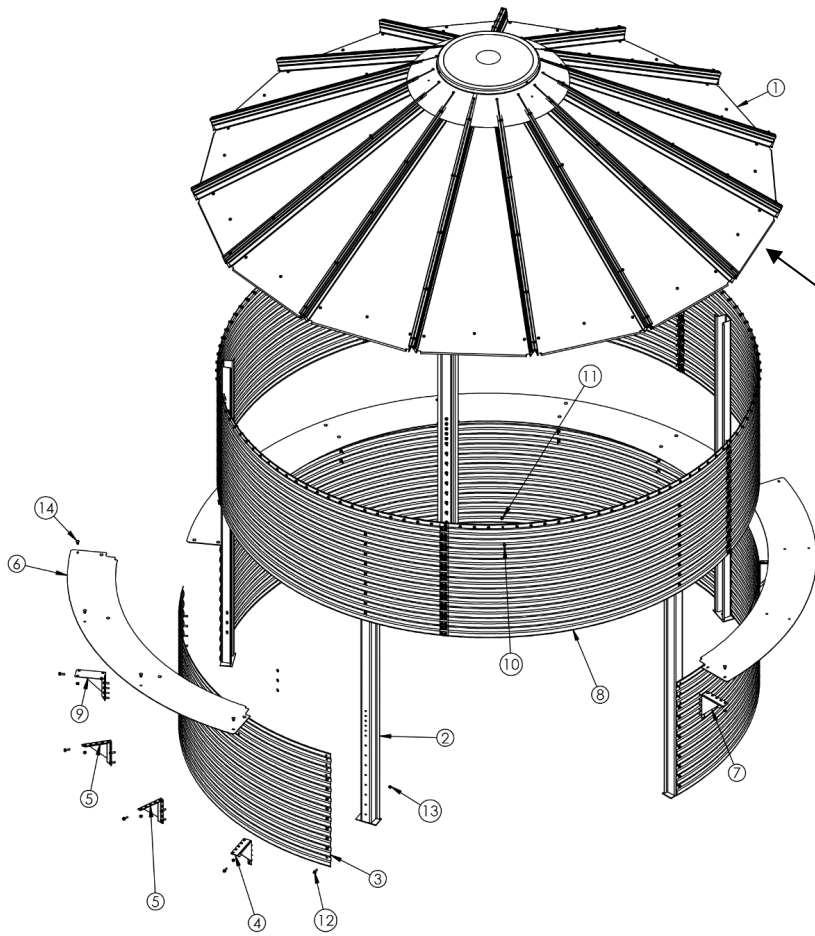
BIN DIA.	PART ND.	ND. REQ'D
12'	225499	16



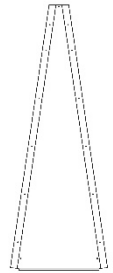
ITEM NO.	PART NUMBER	DESCRIPTION	BOTTOM WITH COUNTERTOP QTY.	BOTTOM QTY.	TOP ONLY/QTY.
1	225990	GAZEBO ROOF PKG – 12 FT – 4 IN RIN/30DEG	1	1	1
2	225994	STIFFENER WLDT-GAZEBP	4	4	4
3	12-403-18	12' 18GA INSIDE STIFF WALL SHEET	3	-	3
4	225935	COUNTER SUPPORT WLDMNTLH END	1	-	-
5	207850	COUNTER SUPPORT WLDMNT-LOUISVILLE 2016	6	-	-
6	225937	COUNTER SUPPORT WLDMNT RH END	1	-	-
7	226007	12FT COUNTERTOP-GAZEBO	3	-	-
8	12-409-18	12' 18GA INSIDE STIFF WALL SHEET	4	4	4
9	207853	COUNTER SPLICE WLDMNT-LOUISVILLE 2016	2	-	-
10	177734	BOLT - .375 BIN-16x 1.00 GR8.2-ASTM F1136	96	96	96
11	168879	NUT - .375-16 HEX FLANGE/CASE HARDENED BZ	96	96	96
12	177738	BOLT - .438 HH BIN-14 x 1.50 GR8.2-ASTM F1136	286	212	286
13	195458	NUT - .438-14 HEX FLANGE/CASE HARDENED BZ	312	212	286
14	220919	BOLT - .438 CARR-14 x 1.00 GR5 BZ	26	-	-

Chapter 7 – Exploded Views & Parts Lists

**Model 1503
Gazebo 15' Diameter**

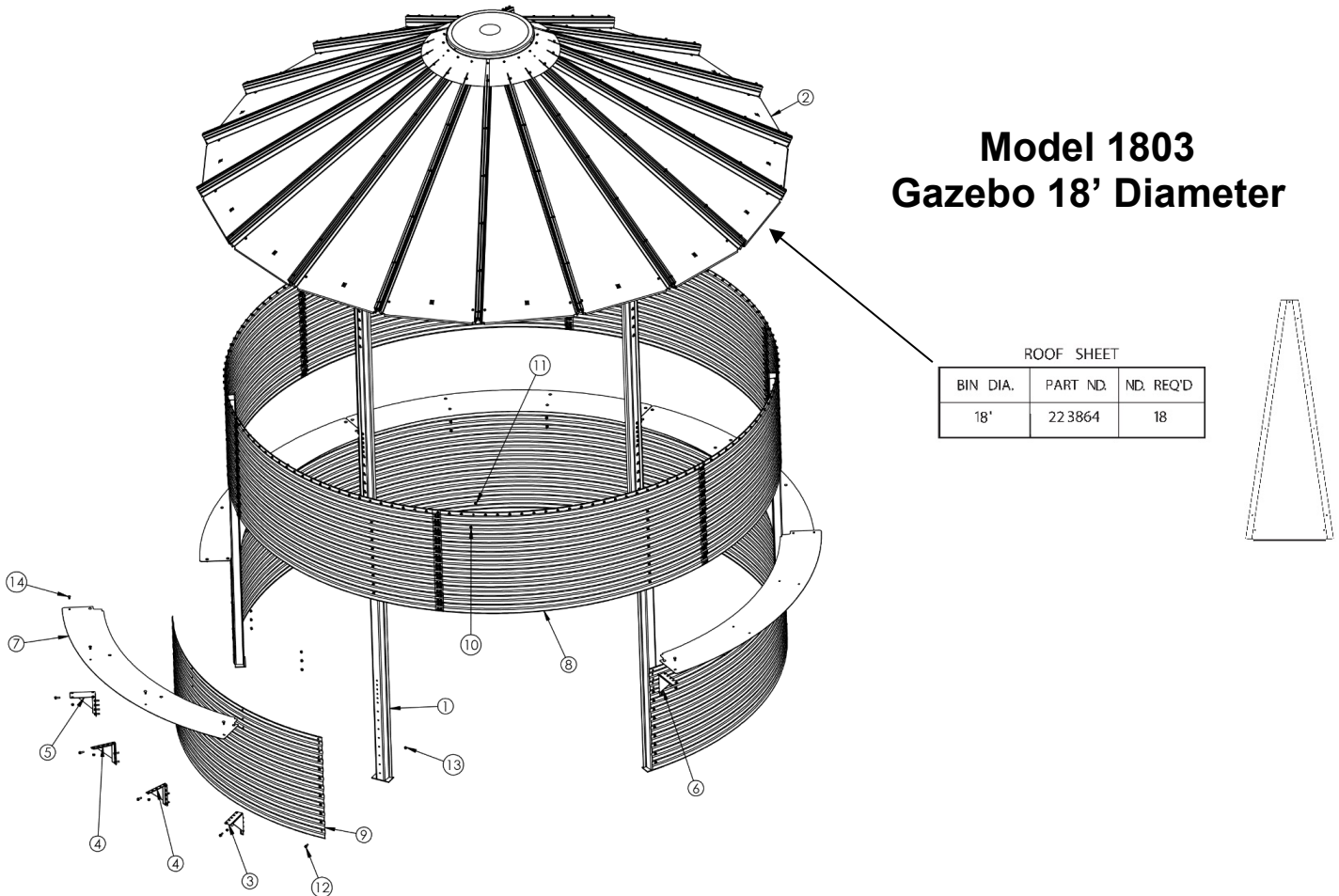


ROOF SHEET		
BIN DIA.	PART NO.	ND. REQ'D
15'	223863	15



ITEM NO.	PART NUMBER	DESCRIPTION	BOTTOM WITH COUNTERTOP QTY.	BOTTOM QTY.	TOP ONLY/QTY.
1	225991	GAZEBO ROOF PKG – 15 FT – 4 IN RIN/30DEG	1	1	1
2	225994	STIFFENER WLDT-GABEZO	5	5	5
3	15-403-18	15' 18GA INSIDE STIFF WALL SHEET	4	4	-
4	225935	COUNTER SUPPORT WLDMNTLH END	1	-	-
5	207850	COUNTER SUPPORT WLDMNT-LOUISVILLE 2016	8	-	-
6	226008	15' COUNTERTOP-GAZEBO	4	-	-
7	225937	COUNTER SUPPORT WLDMNT RH END	1	-	-
8	15-409-18	15' 18GA INSIDE STIFF WALL SHEET	5	5	5
9	207853	COUNTER SPLICE WLDMNT-LOUISVILLE 2016	3	-	-
10	177734	BOLT - .375 BIN-16x 1.00 GR8.2-ASTM F1136	115	115	115
11	168879	NUT - .375-16 HEX FLANGE/CASE HARDENED BZ	115	115	115
12	177738	BOLT - .438 HH BIN-14 x 1.50 GR8.2-ASTM F1136	364	364	270
13	195458	NUT - .438-14 HEX FLANGE/CASE HARDENED BZ	396	364	270
14	220919	BOLT - .438 CARR-14 x 1.00 GR5 BZ	32	-	-

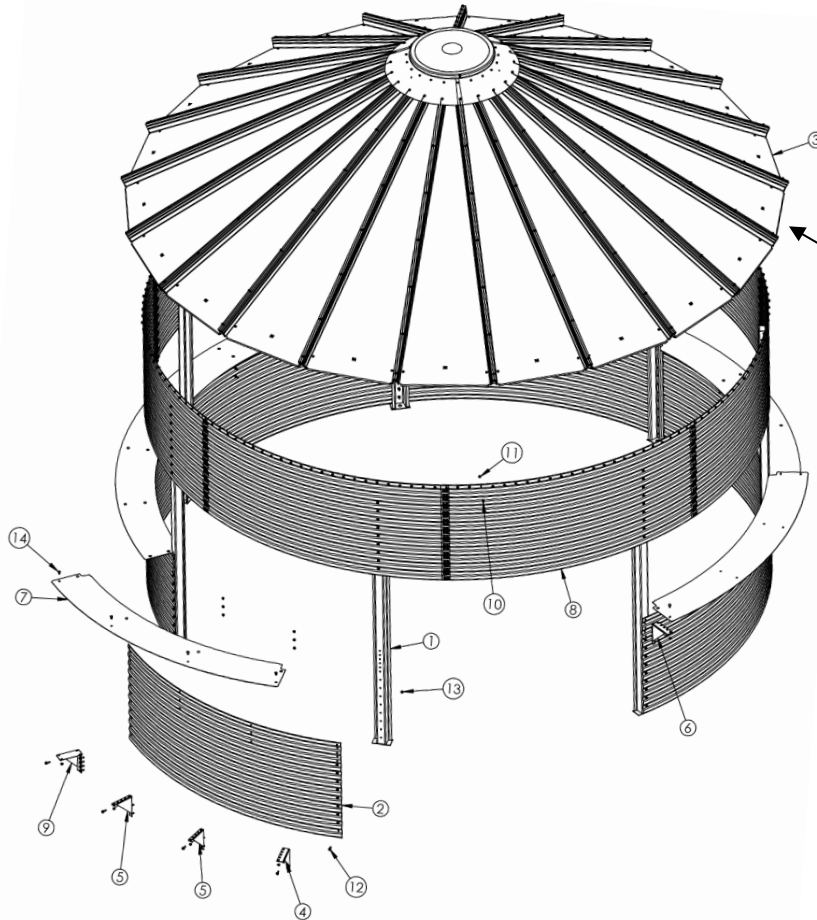
Chapter 7 – Exploded Views & Parts Lists



ITEM NO.	PART NUMBER	DESCRIPTION	BOTTOM WITH COUNTERTOP QTY.	BOTTOM QTY.	TOP ONLY/QTY.
1	225994	STIFFENER WLDT-GAZEBO	6	6	6
2	225992	GAZEBO ROOF PKG – 18 FT – 4 IN RIN/30DEG	1	1	1
3	225935	COUNTER SUPPORT WLDMNTLH END	-	-	1
4	207850	COUNTER SUPPORT WLDMNT-LOUISVILLE 2016	-	-	10
5	207853	COUNTER SPLICE WLDMNT-LOUISVILLE 2016	-	-	4
6	225937	COUNTER SUPPORT WLDMNT RH END	-	-	1
7	225934	COUNTERTOP-GAZEBO VERS2	-	-	5
8	18-409-18	18' 18GA INSIDE STIFF WALL SHEET	6	6	6
9	18-403-18	18' 18GA INSIDE STIFF WALL SHEET	-	5	5
10	177734	BOLT - .375 BIN-16x 1.00 GR8.2-ASTM F1136	144	144	144
11	168879	NUT - .375-16 HEX FLANGE/CASE HARDENED BZ	144	144	144
12	177738	BOLT - .438 HH BIN-14 x 1.50 GR8.2-ASTM F1136	318	432	433
13	195458	NUT - .438-14 HEX FLANGE/CASE HARDENED BZ	318	432	513
14	220919	BOLT - .438 CARR-14 x 1.00 GR5 BZ	-	-	52

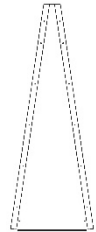
Chapter 7 – Exploded Views & Parts Lists

**Model 2103
Gazebo 21' Diameter**



ROOF SHEET

BIN DIA.	PART NO.	NO. REQ'D
21'	22386 5	21



ITEM NO.	PART NUMBER	DESCRIPTION	BOTTOM WITH COUNTERTOP QTY.	BOTTOM QTY.	TOP ONLY/QTY.
1	225994	STIFFENER WLDT-GAZEBO	7	7	7
2	21-403-18	21' 18GA INSIDE STIFF WALL SHEET	6	6	-
3	225993	GAZEBO ROOF PKG – 21 FT – 4 IN RIN/30DEG	1	1	1
4	225935	COUNTER SUPPORT WLDMNTLH END	1	-	-
5	207850	COUNTER SUPPORT WLDMNT-LOUISVILLE 2016	12	-	-
6	225937	COUNTER SUPPORT WLDMNT RH END	1	-	-
7	226009	21 FT COUNTERTOP-GAZEBO	6	-	-
8	21-409-18	21' 18GA INSIDE STIFF WALL SHEET	7	7	7
9	207853	COUNTER SPLICE WLDMNT-LOUISVILLE 2016	5	-	-
10	177734	BOLT - .375 Bin-16x 1.00 GR8.2-ASTM F1136	168	168	168
11	168879	NUT - .375-16 HEX FLANGE/CASE HARDENED BZ	168	168	168
12	177738	BOLT - .438 HH BIN-14 x 1.50 GR8.2-ASTM F1136	571	571	437
13	195458	NUT - .438-14 HEX FLANGE/CASE HARDENED BZ	565	505	371
14	220919	BOLT - .438 CARR-14 x 1.00 GR5 BZ	60	-	-



NOTES



NOTES



NOTES

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