MERIDIAN®

SINGLE CORRUGATED WATER TANK

meridianmfg.com/corrugatedwatertank

ASSEMBLY MANUAL

SIGN-OFF FORM

Meridian Manufacturing Inc. follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE), and the Occupational Safety and Health Administration (OSHA). Anyone who will be using or maintaining the bin must read and clearly understand ALL Safety and Maintenance information presented in this manual.

Review this information annually, before the season start-up.

Make these periodic reviews of SAFETY and USAGE a standard practice for all of your equipment.

This form is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in this manual. Copy this page to continue record.

Date	Employee's Signature	Employer's Signature

PRODUCT REGISTRATION FORM

Attention Dealers:
You can register products online through the Dealer Login: http://dealers.meridianmfg.com/login/

It is mandatory to register your product in order to qualify for future warranty claims that may arise. Knowingly falsifying information on this form will result in the voiding of the product warranty.

You may scan/photograph this completed form (must be legible), email it to: register@meridianmfg.com
A copy of this form may also be mailed to Meridian Manufacturing Inc.

Buyer's Name _____ Dealer's Name _____

Address _____ Address _____

City, Prov/State_____ City, Prov/State _____

Postal/Zip Code _____ Postal/Zip Code _____

Phone Number _____ Phone Number_____

Note: Registering a product in multiple entry format is only allowed when the product has the same model number and the same dealer, however each serial number must be legibly listed for each unit. Delivery dates for a multiple entry must be within a one month time frame.

Product Information: _____

Model Number _____ Serial Number _____

Invoice Date _____

Important: Please send this form to the Meridian Manufacturing Inc. location which built this product being registered. If you require further assistance call you're dealer or the Meridian outlet nearest to your location.

We want to thank you for purchasing a Meridian manufactured product. Whether this is your first Meridian purchase or you have been a customer for years, you are now part of the Meridian community of customers and we appreciate your business.

It is important that you now complete the product registration information and this form indicating you have received delivery. This registration and information is necessary to ensure you have access to warranty and product updates in the event it be required in the future.

Registration can be completed by using this form or visiting your dealer who will complete the form online. You will be given access to the Meridian community and become eligible for updates, special offers and prizes.

Again thank you for choosing Meridian.

I have thoroughly instructed the buyer on the above described equipment. The review included the content of this manual, equipment care, adjustments, safe operation and warranty policy.

Date _____ Dealer's Signature _____

The above equipment and this manual have been received by me. I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date _____ Buyer's Signature _____

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TABLE OF CONTENTS

continued on next page

TABLE OF CONTENTS

Section 1: INTRODUCTION

Thank you for choosing a Meridian Manufacturing Inc. Water Tank for your environmental containment needs.

Safe, efficient assembly means that everyone who will be involved must read this manual.

Information provided herein is of a descriptive nature. Consistent with Meridian's policy of continued research and development of our products, we reserve the right to modify the equipment design and specifications and change information contained in this publication without any preliminary notice.

Keep this manual handy for future reference. Call your Meridian dealer or distributor if you need assistance, information or additional/replacement copies, or a digital copy of this document.

Tank specifications, features and available options may vary depending on the region.

Disclaimer:
These instructions are based on standard assembly. A few popular options are described.
Many options change the location and arrangement of parts.
Your situation may necessitate a change from the described instructions.

IMPORTANT:
Parts lists, drawings and schematics are shipped, along with this manual.
Refer to them, as you read this manual for specific details;
such as, measurements, fasteners to use, and position of components.

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Section 2: SAFETY

3 Big Reasons why safety is important to you:

- Accidents Disable and Kill
- Accidents Cost
- Accidents Can Be Avoided

The Safety Alert Symbol means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert Symbol identifies important safety messages on the tank and in this manual.

The following signal words are used in this manual to express the degree of hazard for areas of personal safety.

When you see the symbol and/or the signal words described below, obey the accompanying message to avoid possible injury or death.

DANGER — Indicates a hazardous situation that, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations. Typically for machine components which, for functional purposes, cannot be guarded.

WARNING — Indicates a hazardous situation, if not avoided, could result in death or serious injury. This word identifies hazards that are exposed when guards are removed. It may be used to alert against unsafe practices.

CAUTION — Indicates a hazardous situation, if not avoided, could result in minor or moderate injury. It may be used to alert against unsafe practices.

NOTICE — Indicates practices or situations which may result in the malfunction of, or damage to equipment.

SAFETY INSTRUCTIONS — Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.

2.1 GENERAL SAFETY

You are responsible for the safe use and maintenance of this water tank. Good safety practices not only protect you, but also those around you. All accidents can be avoided.

- Use this water tank for its intended purposes.
- This water tank is not intended for use by children.
- Do not modify the tank in any way without written permission from the manufacturer. Any unauthorized modification of the water tank will void the warranty.

2.2 ASSEMBLY SAFETY

- All platforms, ladders, stairways, fixed ladders, cages, handrails, and guardrails must be clean and free of all debris. Remove anything which may cause accidental tripping and/or falling. Keep the assembly area clean and orderly.
- Keep all persons not involved in assembly away from work area.
- Stay away from overhead obstructions.
- Provide adequate space for forklifts and hoists to move components, large and small, around the structure.
- Components can be heavy and awkward. Always wear protective equipment to prevent cuts, scrapes, and pinching.

2.3 WORK SAFETY

- Keep all platforms, ladders, stairways, fixed ladders, cages, handrails, and guardrails clean and free of all debris. Remove anything which may cause accidental tripping and/or falling. Keep the work area clean and orderly.
- This structure holds liquid and is a drowning hazard. Keep ladder guards, manway hatch lid, and barriers locked to prevent unauthorized persons or children from climbing and/or entering the structure.
- Mount signage around structure to indicate that this structure is off limits. No unauthorized persons allowed.
- Keep structure in good repair, to prevent sharp edges and corners from becoming hazards.

2.4 PERSONAL PROTECTIVE EQUIPMENT

The following Personal Protective Equipment (PPE) should be worn at all times when assembling or working the area:


Safety Glasses


Coveralls


Hard Hat


Steel-Toe Boots


Work Gloves

2.5 SAFETY DECALS

- Keep safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible.
- Replaced parts must display the same decal(s) as the original parts.
- Replacement safety decals are available free of charge from your distributor, dealer, or the factory.

2.5.1 Applying Decals:

1. Be sure the application area is clean and dry. Ensure the surrounding temperature is above 10°C (50°F).
   a. Remove all dirt, grease and wax from the surface.
   b. Clean the area with a non-ammonia based cleaner.
   c. Wipe the clean surface with isopropyl alcohol on paper towel, and allow to dry.
2. Determine the exact position before you remove the backing paper.
3. Peel a small portion of the split backing paper.
4. Align the decal over the specified area. Use a squeegee to carefully press the small portion, with the exposed adhesive backing, into place.
5. Slowly peel back the remaining paper and carefully smooth the rest of the decal into place.
6. Small air pockets can be pierced with a pin and smoothed out using the squeegee, or a piece of sign backing paper.

2.6 SAFETY DECAL LOCATION

Safety decals are attached to the structure in a visible and convenient location for readability. A safe workplace requires that you familiarize yourself with the various safety decals and the areas or functions that the decals apply to. You should also be aware of the safety precautions that must be taken to avoid injury, death, or damage.

Fig 1 - Safety decal

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Section 3: BEFORE YOU START

3.1 TANK DESIGN

The following design specifications are for standard Meridian® Water Tanks. Design upgrades may be available, please contact Meridian directly for more information.

1. Containment of liquids with specific gravity of less than or equal to 1.0.

2. Maximum factored horizontal gusted wind speed of 169 km/h (105 mph).

3. Zero seismic activity.

Note:
Seismic resistance of a water tank varies with height and diameter. Many standard designs have significant seismic capabilities. Designs can be reviewed and/or modified for local requirements.

4. Roof Snow Load (RSL) capacities vary with diameter and peak load. See Table 1 for maximum RSL by diameter.

   The correlation between Ground Snow Load (GSL) and RSL for grain bin and water tank designs are as follows:

   a. The rule of thumb for the United States is RSL = 0.55 * GSL
   (See ASCE 7-10 Section 7.4)

   b. The rule of thumb for Europe is RSL = 0.8 * GSL
   (See EN 1991-1.3-2003 Section 5.2)

   c. There is no rule of thumb for Canada, the calculation is site specific.

*Available roof upgrades to increase RSL capacity.

Table 1 - Roof Snow Load (RSL) Information Table

ROOF DIAMETER (feet)	PEAK LOAD LB [KN])	STANDARD ROOF RSL	
		(psf)	(kPa)
6	5000 [22.2]	50	2.4
9		50	2.4
12		50	2.4
15		35.7	1.7
18		19.5	0.9
21		11.8	0.6
24		7.6	0.4
27		7.5	0.4
30		23.9	1.1
33		19.6	0.9
36		16.3	0.8
39		13.9	0.7
42		11.9	0.6
48		9.3	0.4

3.2 SITE AND ASSEMBLY

Unless otherwise specifically provided in writing, Meridian does not take responsibility for any defects or damages to any property, or injury to any persons, arising from or related to any site or assembly considerations, including but not limited to:

- Water tank location and water tank siting.
- Soil conditions and corresponding foundation requirements.
- Water tank assembly. Meridian recommends the use of qualified water tank installers; contact Meridian for information on installers in your area.
- Field modifications or equipment additions that affect the tank structure.
- Interconnections with neighbouring structures.
- Compliance with all applicable safety standards, including but not limited to, fall restraint systems (ladders or other systems). Local safety authorities should be contacted as standards vary between jurisdictions.

3.3 METHOD OF ERECTION

Recommendations for installing Meridian structures should be closely followed to achieve the full strength of the structure, and to achieve adequate weather sealing. Warranty is void if the recommendations are not followed including but not limited to:

- Wall sheets that are not specified for a given tier are used.
- Foundations are found to be inadequate or out-of-level.
- Anchor bolts (cast-in-place, drill-in, chemical type or other) are found to be inadequate.

If using jacks, choose a hoist with a suitable capacity for the expected empty structure deadload. Make sure the rated capacity of the hoist is not exceeded.

See Section 4.10 Techniques for Tank Jacks.

3.4 CRITICAL ASSEMBLY REQUIREMENTS

To ensure a successful, safe and reliable outcome you must comply with the following assembly techniques and practices:

- Local code and jurisdictional requirements that are applicable to the structure installation must be adhered to.

- Foundations must be designed for the loads being imparted to them, and for local soil conditions.

- Foundations must provide uniform and level support to the structure being supported. Surface imperfections causing gapping must be remedied. This may involve, but is not limited to, grouting under the bottom ring angle or shimming under anchor chairs.

- Ensure that proper hardware is utilized for all bolted connections.
  Refer to Table 13: Hardware Where Used.

- Comply with all assembly instructions provided in the appropriate assembly manual to make sure the structure is constructed safely.

IMPORTANT:
Do not deviate from the
wall sheet layouts provided.

- When installing roof stiffening rings, if it is necessary to shorten the stiffening ring tubes, shorten them as little as possible. Initially, the nuts on the expansion bolts should be centred, and as close together as possible.

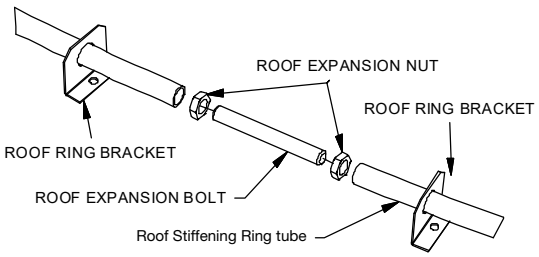


Fig 2 - Stiffening Ring Tube detail

Tighten the nuts evenly, alternating from one to the other, so that they remain centred on the bolts. The amount of tightening must be shared between all expansion bolts on the same stiffening ring, so they are all equal.

- Before anchoring the structure to the foundation, ensure that the structure is round. The maximum variation from perfect roundness is 3/4” on the radius. Position anchor bolts towards the outside of the anchor bolt holes (away from the structure) to permit the incremental expansion that can occur with the initial filling.

3.5 PLANNING AND TIMING

Before unpacking the product and before construction begins, pre-planning is recommended.

Meridian® Water Tanks are generally constructed from the top down. The top ring of wall sheets and the roof are installed first. Then the tank is raised and other wall sheet rings are sequentially added. The best time to install components and accessories are when those sections of the tank are readily accessible, before the tank is raised such that the installation location is out of reach. It is advisable to construct a diagram of accessories and their relative location before construction.

- If a stencil wall sheet is being used, consult with the owner as to preferred location. The sheet is usually set to face the road or the yard.
- Orientation of the manway hatch is usually on one side or the other of the roof ladder.
- Orientation of the roof ladder is usually located in line with the sidewall ladder, however, lining up the sidewall ladder with the roof panel with manway hatch, is another alternative.
- If equipped with sidewall spiral stairs, the location of the top platform must be given similar consideration.
- Consideration of the locations of accessories, such as but not limited to water level gauges and pipe penetrations, relative to other components and features, must be given.
- Penetrations through wall sheets must not be made on a vertical or horizontal bolt seam. Penetrations should be located towards the centre of a wall sheet, so that any holes and collars/flanges do not interfere with any structural bolt hole locations. It is also necessary to support any equipment that is attached to the water tank if it is excessively heavy and cannot support itself.

Some things to consider during construction of the water tank:

- Position the geotextile bag and liner in the centre of the water tank before installation of wall sheets.
- Before the liner is attached to the top ring wall sheets, make sure the roof ladder and top tier sidewall ladder or stairs (and any associated parts like platforms, cages, etc.) are installed, as well as any roof-mounted accessories.
- Penetrations should also be installed while the corresponding wall sheet ring is still at ground level.
- As the water tank is being raised, remember to continue assembling the sidewall ladder, cages, and spiral stairs, as you go.

3.6 PRODUCT STORAGE

3.6.1 Rust on Galvanized Parts:

- Galvanized surfaces will develop a durable zinc oxide layer naturally over time as the surface interacts with carbon dioxide. The zinc oxide layer is characterized as the dull grey appearance that weathered galvanized surfaces get.

- White rust may form when moisture is allowed to collect on galvanized surfaces that have yet to develop this durable zinc oxide layer. This may happen when parts are not well-ventilated or well-drained.

- White rust is not a structural concern if its development is stopped in the early stages. A light film or powder residue can occur after a period of heavy rainfall or temporary improper storage.

  If white rust begins to develop:
  - First, ensure proper storage, separate parts and wipe off any moisture.
  - Second, apply a thin layer of petroleum jelly or food-grade oil to the entire part using a clean cloth.
    Due to safety concerns with installation and use, this is not recommended for such parts as roof sheets and ladders.

- If parts are left exposed to moisture, white rust can progress into red rust. Red rust can cause degradation in the steel and become a structural concern. Any part that has red rust should be replaced immediately.

3.6.2 Storage Guidelines:

- Start assembly as soon as possible.

- If considerable time is involved between delivery and erection time, inside storage is recommended.

- Keep all bundles dry before assembly. All hardware boxes should be stored inside, as they are not waterproof and will allow parts inside to become wet.

- Keep bundles off of the bare ground by raising them 6 - 8” off the ground on wood blocks or timbers.

- Store curved wall sheets “hump up.”
  See Figure 3.

  All other bundles should be stored so they are well-sloped to promote good drainage. Specifically, roof sheets must be elevated at least 12” at the narrow end of the sheets.
  See Figure 4.

- Temporary storage can be provided by a simple frame supporting a waterproof tarp.
  See Figure 5.

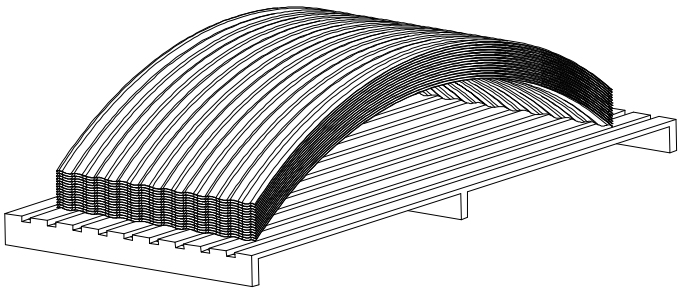
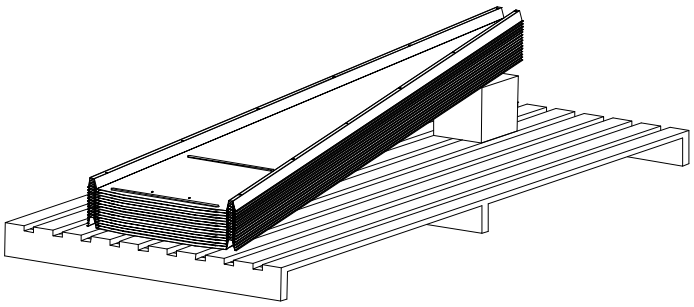


Fig 3 - Wall sheets elevated and hump up

Fig 4 - Roof sheets sloped so peak is elevated



3.6.3 If Parts Become Wet:

- If bundles become submerged or wet, they should be opened as soon as possible and separated to dry until assembly. Allow parts to drain while maintaining proper bracing to avoid damage or injury from parts falling over. See Figure 6.

  An optional thin layer of petroleum jelly or food-grade oil may be applied to the entire part using a clean cloth.

  Due to safety concerns with installation and use, this is not recommended for such parts as roof sheets and ladders.

- If hardware boxes become submerged or wet, parts should be removed, dried, and stored in a new box that is dry.

3.7 IMPORTANT NOTES

- Store wall sheets in a dry place. Keep your wall sheets in good condition by separating them and allowing air circulation between them. Always store them “hump-up”. See Figure 3.

- Follow minimum power line clearances by contacting local power officials.

- Refer to Section 3.1 Tank Design, for information about what can be stored in this tank.

- Refer to Section 5.7 Recommended Bolt Assembly, for information on how to tighten the bolts.

- In areas with high snow loads, do not locate the water tank close to high buildings, as this may cause snow to fall onto or build up on the roof of the tank. Consider future expansion and allow space for filling and draining of the water tank. Your dealer can help you plan your storage system for maximum efficiency.

Fig 5 - Tarp over frame

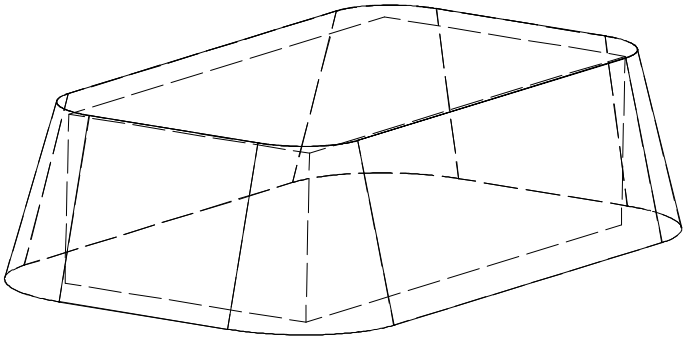
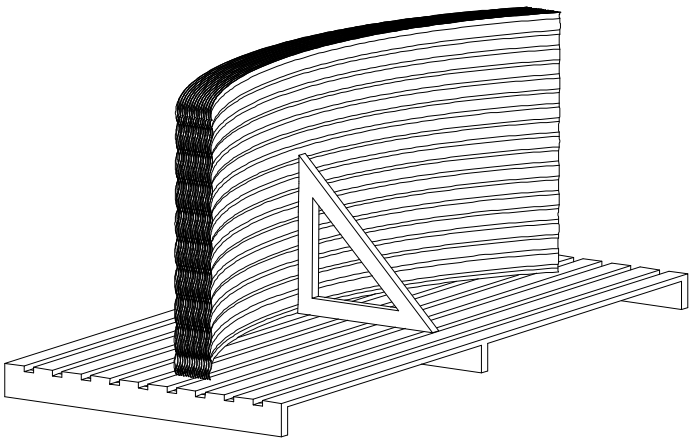


Fig 6 - Parts draining while braced



Section 4: ASSEMBLY

4.1 CHECK YOUR SHIPMENT

- Upon delivery, check all parts and packages against the packing list. Ensure that all items have arrived and that none are damaged.
- Do not begin installation with missing or damaged parts.
- When you are satisfied that all parts are in good condition, lay the parts out for convenient access.
- Carefully read and understand this installation manual before proceeding with assembly.

4.2 SHORTAGE AND DAMAGED PARTS

- Report shortages or damaged parts immediately to the delivery carrier, followed within ten days by a confirmation letter requesting inspection by that carrier, if required.
- Order necessary parts immediately to ensure that assembly will not be held up.
- All parts will be charged for and credit will be issued by the party at fault. No credit will be issued if delivery invoices are signed and received in good condition.

4.3 TOOLS AND EQUIPMENT

Use quality tools and equipment. Use them safely and correctly for their intended use. The tools and safety equipment for this application should include, but are not limited to:

- Tools:
  - Impact tools
  - Power drills and drill bits
  - Sockets
  - Large-pocket carpenter pouch
  - 8” (20 cm) metal tapered punches (for aligning bolt holes)
  - Construction grade step and extension ladders
  - 6-point wrenches (Imperial, box end)
  - Metal-cutting saw suitable for cutting roof stiffening ring tubes and wind ring tubes
  - Scaffolding
  - Centre-post support stand
  - Crane and/or bin jacks
- Safety Equipment:
  - Properly-stocked first-aid kit
  - Personal protective equipment (PPE) like safety glasses, steel-toed boots, hard hats, work gloves
  - Cable, chain, or rope to tie down tank or jacks in case of wind during assembly

4.4 ORDER OPTIONAL EQUIPMENT

- Optional equipment such as inlet/outlet flanges, fittings, liner, anchor bolts, ladders and accessories, etc. should all be on site and checked before assembly starts.

- Plan your assembly in advance, so all equipment and supplies are on site and no delays will be experienced.

- For details, see installation manuals supplied with the optional equipment.

4.5 ROOF ASSEMBLY

4.5.1 Preparation for Roof Assembly:

1. Inspect the concrete foundation to ensure that the foundation meets all the requirements of the installation.

2. Plan the water tank orientation, including water tank accessories and features like ladders, manway hatch, inlets, outlets, and signs.

3. Build a centre support to hold the peak ring in place at the proper height as shown in Figure 7, during roof erection.
   Refer to Table 2 for proper peak ring support height as per water tank diameters.

Note:
Make sure centre support is vertical, braced, and anchored properly for safe installation.

4. Prepare foundation and assemble first tier as per Section 4.6 Wall Sheet Assembly.

Fig 7 - Peak ring supported on centre post.

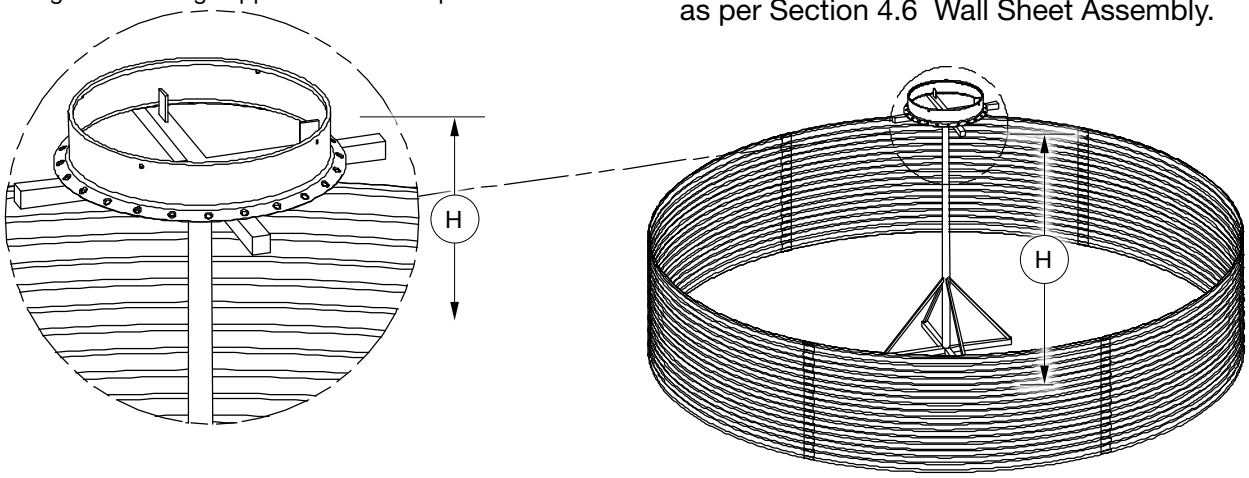


Table 2 - Roof Assembly Preparation

TANK NOMINAL DIAMETER (feet)	CENTRE SUPPORT POLE HEIGHT, H*		ROOF STIFFENING RING LOCATION (RING DIAMETER)	
	(feet)	(meter)	(EXTERIOR)	(INTERIOR)
6	5.3	1.6	--	--
9	6.2	1.9	--	--
12	7.0	2.1	--	--
15	7.9	2.4	--	--
18	8.8	2.7	--	--
21	9.6	3.0	--	--
24	10.5	3.2	--	--
27	11.4	3.5	6th Hole (Ø 18')	--
30	11.8	3.6	6th Hole (Ø 18')	--
33	12.7	3.9	7th Hole (Ø 21')	--
36	13.6	4.1	8th Hole (Ø 24')	--
39	14.4	4.4	2nd Hole (Ø 6') 8th Hole (Ø 24')	8th Hole (Ø 24')
42	15.3	4.7	2nd Hole (Ø 6') 8th Hole (Ø 24')	8th Hole (Ø 24')
48	17.0	5.2	--	--

*Support Height 'H' is based on the height up to the top of the peak ring with one tier of wall sheets. Value is approximate for installation and centre support may need adjusting as installation progresses.

4.5.2 Recommended Procedure for Roof Assembly:

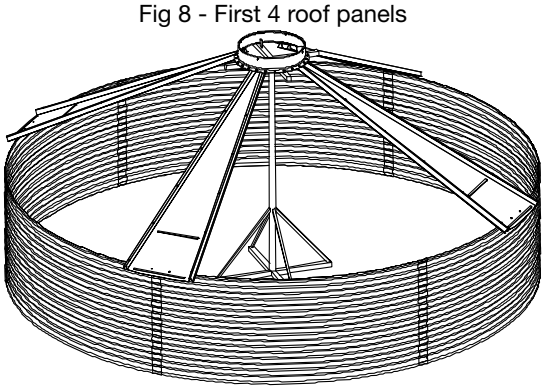
Note:
During assembly do not tighten fasteners until the roof is completely assembled.

1. Attach four roof panels at the quarter points of the water tank. See Figure 8.

Note:
For water tanks over 30’ it may not be possible to split the roof into four equal quadrants. In that case split the roof into four sections as equal as possible.

Note:
Roof diameters 6’, 9’, and 12’ roof sheets sit on top of peak ring lip. All other sizes are attached underneath peak ring lip.

Fig 8 - First 4 roof panels



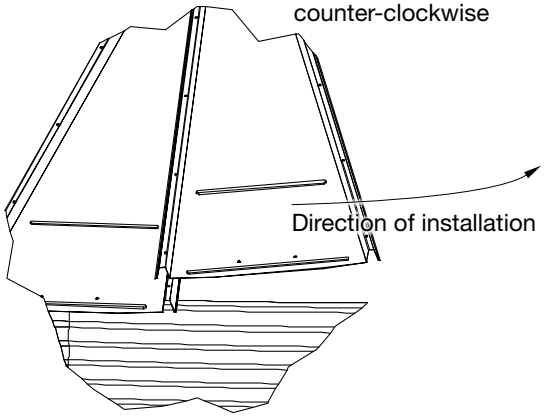
   a. The narrow end of the roof panel should be at the peak ring and the wide end at the eave angle.

   b. Use 3/8 x 1-1/4” bolts and nuts to attach the roof panel to the peak ring.

   c. Use 3/8 x 3/4” bolts, nuts, and washers to attach the roof panel to eave angles, beginning with the centre hole of the panel and working outward from there (unless there is an even number of holes). Leave the roof panel rib unbolted for now.

2. Add remaining panels to each section in a counter-clockwise direction. Alternatively add roof panels sequentially in the different quadrants to keep the weight on the peak ring balanced, while maintaining a counter-clockwise installation direction.

Fig 9 - Next panel over previous, counter-clockwise

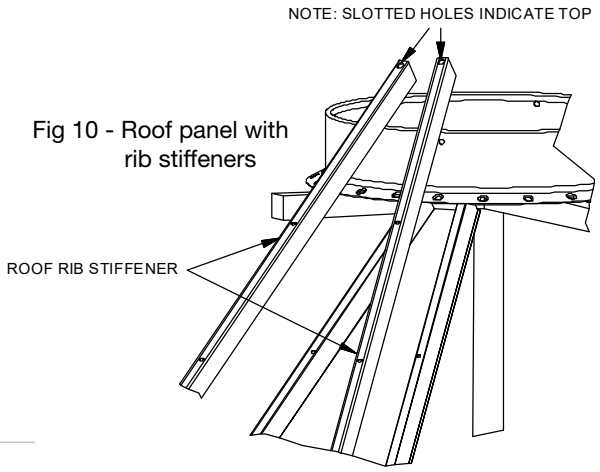


   a. Ensure left roof panels are always underneath the right roof panel as viewed looking towards the centre of the tank. See Figure 9.

   b. Make sure to install the roof rib stiffeners where the roof ladder will be located by capping the rib with the rib stiffener. Ensure that the slotted end of the rib cap is installed at the peak of the roof. See Figure 10.

Note:
Roof diameters 6’ and 9’ do not come with roof rib stiffeners.

Fig 10 - Roof panel with rib stiffeners



c. Use 3/8 x 1-1/4” bolts and nuts to attach roof panel ribs to each other.

Note:
If roof requires stiffening rings this would be an ideal time to install the stiffening ring brackets. Refer to Section 4.5.3

d. Use 3/8 x 3” bolts and nuts to attach roof panel ribs to the eave angles, for 15-27’ water tanks.

   Use 3/8 x 4” bolts and nuts to attach roof panel ribs to the eave angles, for 30-42’ water tanks.

3. Caulk and place sealing foam between the peak ring and the top part of roof panels.

4. Insert sealing caps under roof panel ribs at the eave.

5. Securely tighten all bolts and make sure roof is completely watertight, with the exception of potential stiffening ring bracket locations.

6. Install roof accessories as required, such as roof ladder, roof stiffening ring, manway hatch.

4.5.3 Roof Stiffening Ring Assembly:

Roofs that require stiffening rings are 27’ to 42’. Refer to Table 2 - Roof Assembly Preparation, for size and location of stiffening rings by roof size.

Note:
42’ roof requires two exterior stiffening rings as well as one interior stiffening ring.

1. Determine correct roof panel rib hole to install stiffening ring brackets.
   - When counting roof panel holes, count the peak ring hole as 1 and continue counting towards the outside of the tank from there.

2. Bolt stiffening ring brackets to the correct location on each roof panel but don’t fully tighten them.

3. Thread stiffening ring tubes through stiffening ring brackets and install 3/4 x 6” threaded expansion bolts with two 3/4” nuts between each tube as shown in Figures 11 and 12.

4. Tighten all stiffening ring bracket fasteners to roof panels. Ensure all roof panel bolts have been tightened. Extend all expansion bolts equally around the roof until the stiffening ring raises the roof to show a slight crown.

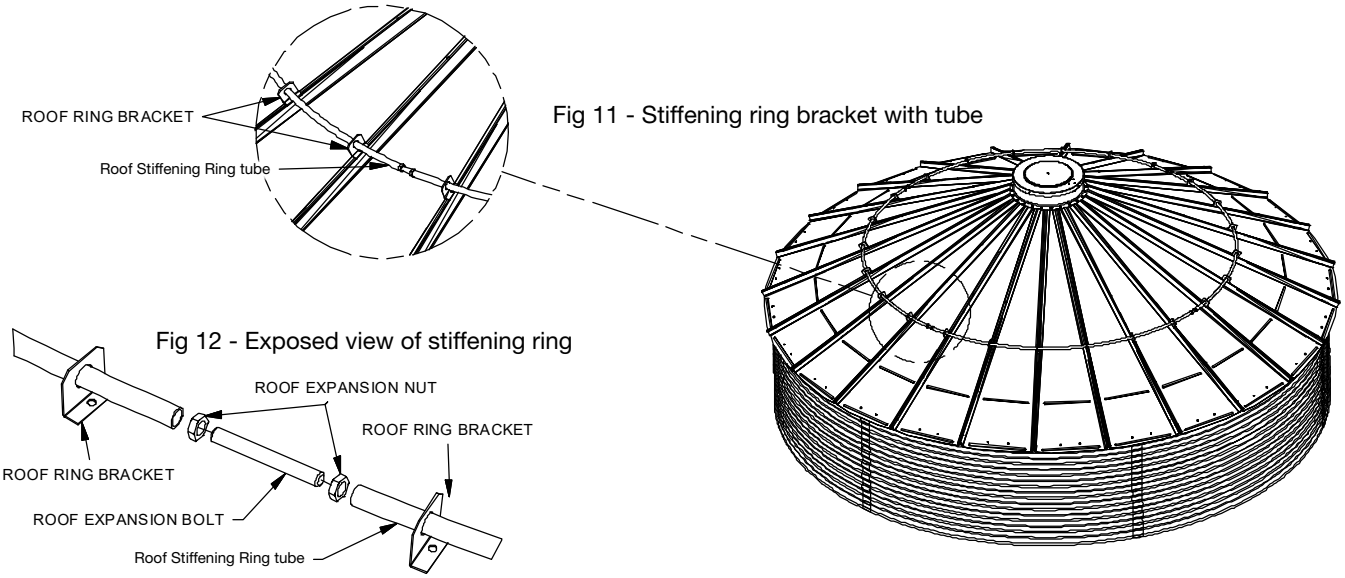


Fig 11 - Stiffening ring bracket with tube

Fig 12 - Exposed view of stiffening ring

4.5.4 Roof Ladder Assembly:

Note:
Roof diameter 6’ does not come with a roof ladder.

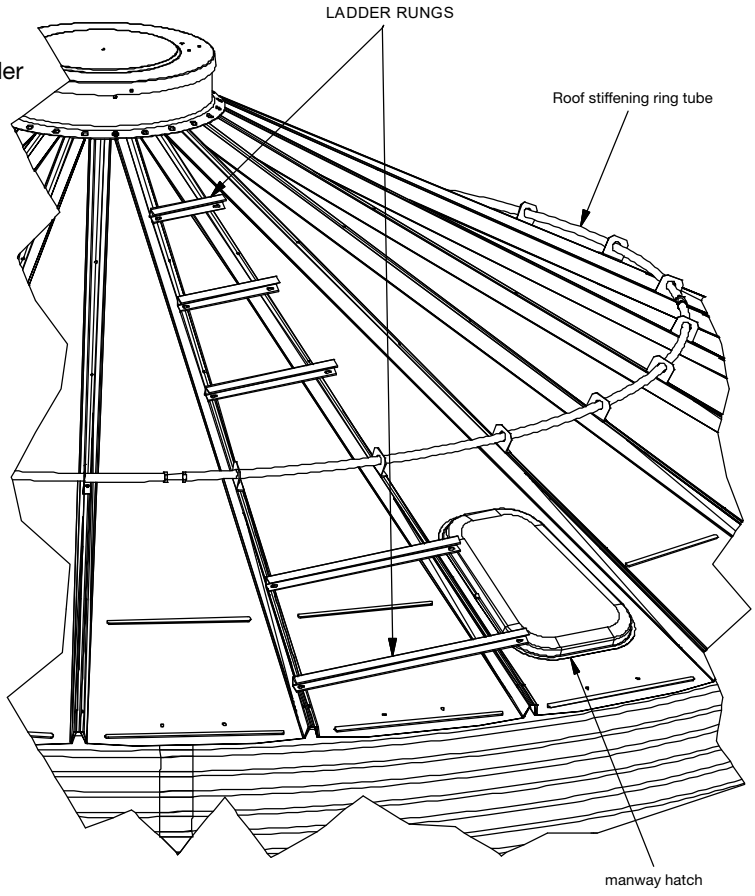
Bolt ladder rungs to roof panel. See Figure 13.

1. Use 3/8 x 1-1/4” bolts and nuts for ladder rung to roof panel rib.

2. Use 3/8 x 3” bolts and nuts for ladder rung to roof panel rib at the eaves, 15-27’ roof.

   Use 3/8 x 4” bolts and nuts for ladder rung to roof panel rib at the eaves, 6-12’ and 30-42’ roofs.

Fig 13 - Roof ladder



4.5.5 Roof Cap Assembly:

1. Drill four 7/16” diameter holes evenly spaced around the roof cap.
   See Figure 14 and 15.

2. Place roof cap on the peak ring. Mark locations of the 4 holes on the peak ring, making sure they are clear of the roof ladder and are located between roof ribs.

3. Remove cap and drill holes onto the ring.

4. Replace cap onto ring and use 3/8 x 1-1/4” bolts and nuts to secure cap.

Note:
Cap will not be removable or accessible once tank is raised.

Fig 14 - Small roof cap

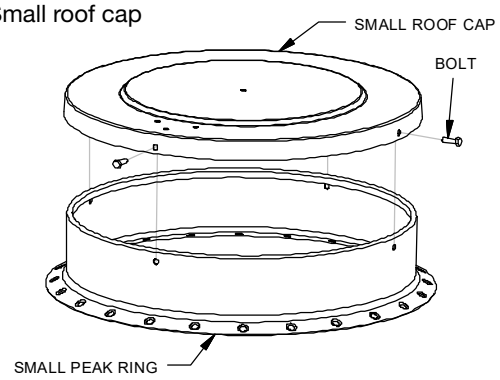
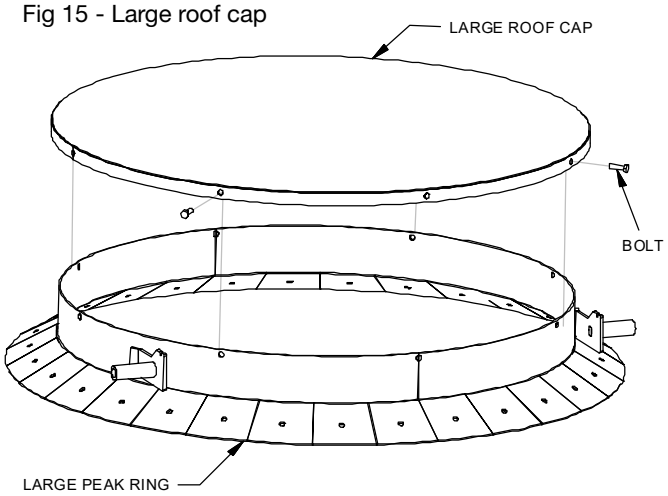


Fig 15 - Large roof cap



4.5.6 Manway Hatch Lid Assembly:

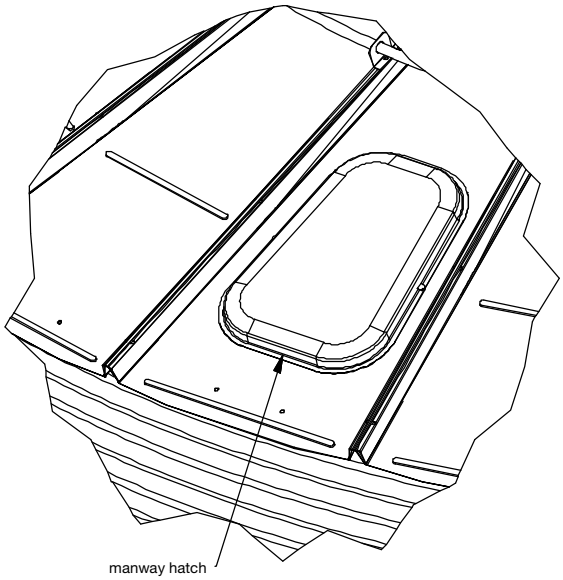
1. Place manway rubber gasket around lip of manway opening.

2. If necessary, trim the gasket to fit.

3. Manway hatch lid and lockable latch should be already riveted to roof panel.
   See Figure 16.

Note:
Locks are not supplied by Meridian.

Fig 16 - Manway hatch lid



4.6 WALL SHEET ASSEMBLY

4.6.1 Wall Sheet Matrix:

Table 3 - Wall Sheet Matrix

THICKNESS NOM (inch)	GAUGE	WEIGHT (lb)	LENGTH (inch)	HEIGHT (inch)	PART NUMBER	
			OVERALL (HOLE-TO-HOLE)	OVERALL (HOLE-TO-HOLE)	STANDARD UNCURVED SHEET	TOP TIER UNCURVED SHEET
0.0396	20	62.3	117.520 (113.386)	46.614 (45.276)	3020102201	3010103203
0.0516	18	81.2			3020102181	--
0.0571	17	95.5			3020102171	--
0.0635	16	100.0			3010103163	--
0.0712	15	111.8			3010103153	--
0.0785	14	123.6			3010103143	--
0.0934	13	147.2			3010103133	--
0.1084	12	170.6			3010103123	--

Note: 16-gauge sheets and heavier will have additional holes punched along one horizontal seam

4.6.2 Water Tank Roundness:

- It is imperative that the water tank be as perfectly round as possible prior to filling.
- The maximum amount that the water tank can be out of round is 3/4” on the radius, when measured from the centre of the water tank.
- The wall sheets must form a smooth circle with no flat or elongated portions.
- Before anchoring the water tank to the foundation, ensure again that the water tank is round within tolerance. Position anchor bolts toward the outside of the anchor bolt holes (away from the water tank). This will permit slight expansion that can occur with the initial filling.

4.6.3 Preparation of Foundation:

IMPORTANT:
A foundation engineer must design and build a correct foundation for the tank.

1. Anchor a string to the centre of the foundation to scribe a circle.

2. Determine the length required (scribe radius) as per Table 4.

Note:
These radii are 3/4” smaller than the wall sheet radius at the bottom so that the scribed circle can be seen during assembly.

3. Scribe the water tank circumference on the foundation

4. Move the liner and textile to the centre of the scribed circle, making sure they are out of the way of the work.

Table 4 - Scribe Radius

TANK NOMINAL DIAMETER (feet)	SCRIBE RADIUS	
	(feet inch)	(meter)
6	2’ 11-3/8”	0.898
9	4’ 5-3/8”	1.356
12	5’ 11-7/16”	1.815
15	7’ 5-1/2”	2.273
18	8’ 11-9/16”	2.731
21	10’ 5-9/16”	3.190
24	11’ 11-5/8”	3.648
27	13’ 5-11/16”	4.107
30	14’ 11-3/4”	4.565
33	16’ 5-3/4”	5.023
36	17’ 11-13/16”	5.482
39	19’ 5-7/8”	5.940
42	20’ 11-15/16”	6.399
45	22’ 5-15/16”	6.857
48	24’	7.315

4.6.4 Wall Sheet Orientation and Assembly Detail:

1. For standard water tanks, orient your wall sheet so that the gauge stamp is on the bottom, left corner of the wall sheet (viewed from the inside of the tank). See Figure 17.

Exception:

Top tier wall sheets should be rotated to have the gauge stamp on the top, right corner (viewed from inside of the tank).

2. While installing, it is recommended that you keep consistent on how you overlap your wall sheet seams.

   For example, overlap the left vertical edge of each wall sheet (viewed from the inside of the tank) on the inside of the neighbouring wall sheet so that the gauge stamp is visible. See Figure 18.

3. Position the wall sheets of each tier so that they are on the inside of the tier above it.

4. Stagger the wall sheets of each tier with the sheets above it. Match the vertical seams with the horizontal centre of the wall sheet above it.

5. Tighten nuts and bolts before lifting the tank for the next tier.

6. When assembling wall sheets, one sheet may be left out to permit ease of access for installers.

   When the tank is lifted, add in this wall sheet while the space is still accessible.

Fig 17 - Wall sheet with stamp on inside, bottom, left corner

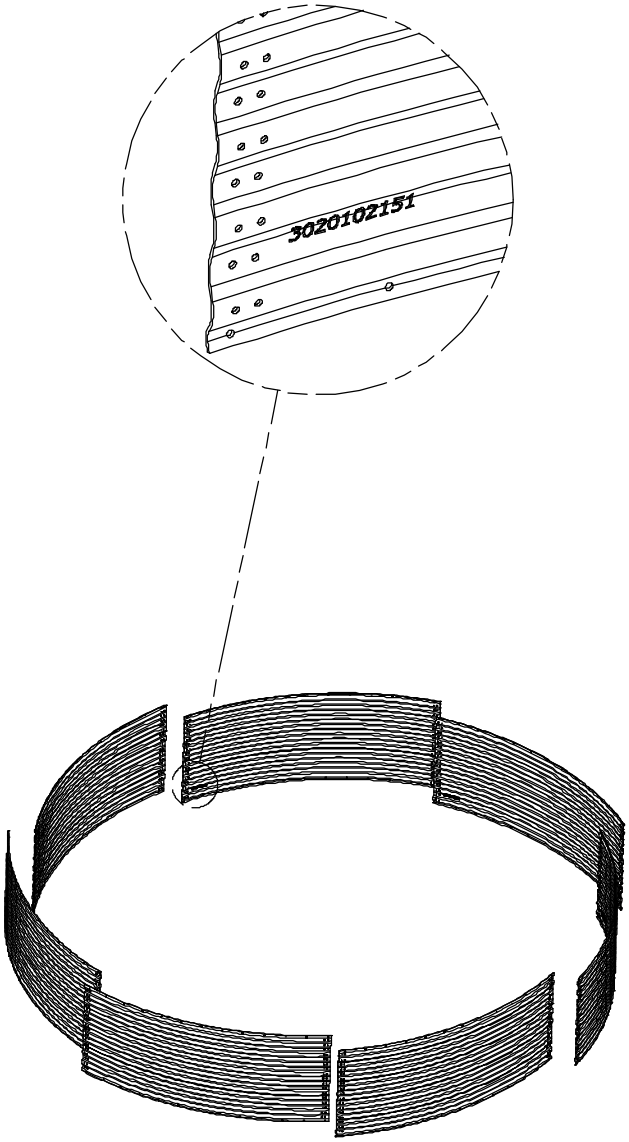


Fig 18 - Overlap pattern of wall sheets

4.6.5 First Tier:

1. Assemble a single ring of wall sheets.

   IMPORTANT:

   Ensure bolt heads are located on the **INSIDE** of the water tank with the nuts on the outside.

2. Check the roundness of the ring as per Section 4.6.2 Water Tank Roundness.

3. When setting jacks make sure they are also set round.

4. Bolt eave angles to the top of the wall sheets using 3/8 x 3/4" bolts and nuts with a flat washer.

   IMPORTANT:

   Ensure bolt heads are located on the **INSIDE** of the water tank with the nuts on the outside.

   a. Match up the ends of the eave angles over the horizontal centre of the wall sheets so that eave angle seams do not overlap wall sheet vertical seams.

   b. Take careful note of the holes on the eave angle. See Figure 19.

      i. The first hole on the angle will match up with the centre horizontal hole on the wall sheet. Insert the first bolt here.

      ii. After the first hole, use a bolt for every third horizontal hole on the wall sheet to install the eave angle. Note: You will be skipping every other hole on the eave angle.

      iii. You should end on the last hole on the angle, centred on the next wall sheet.

5. Bolt liner clamps to the top of the wall sheets using 3/8 x 2-1/2" bolts and nuts. Follow steps in Section 4.7 Water Tank Liner Installation.

   a. Using the skipped holes on the eave angle (see Step 4.b.ii above), use one bolt per hole.

      IMPORTANT:

      Ensure bolt heads are located on the **OUTSIDE** of the water tank with the nuts on the inside.

   b. Place liner clamp onto bolt. Screw on second nut to fix clamp in place but do not tighten completely.

6. Apply a continuous strip of caulking to the corrugated edge of the eave angle before installing roof panels.

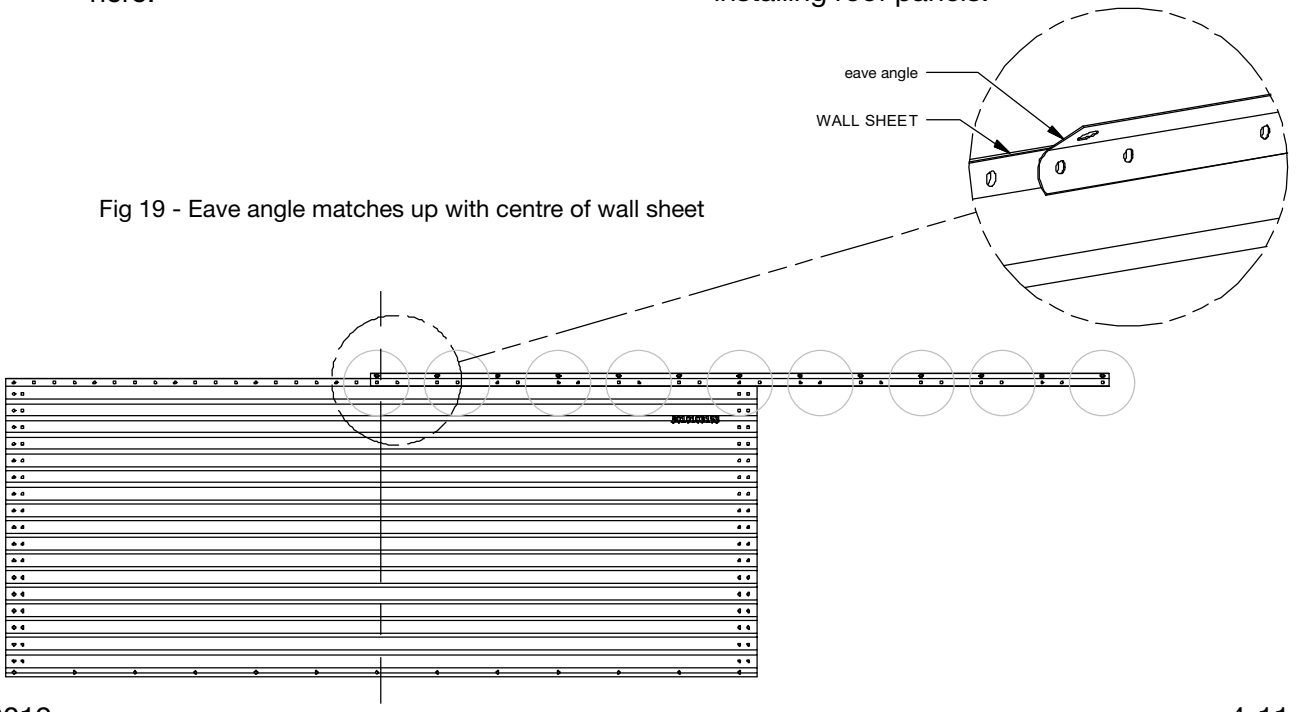


Fig 19 - Eave angle matches up with centre of wall sheet

4.6.6 Prior to Installing Liner and Lifting Water Tank for the First Time:

Before installing the liner, precautions should be taken to protect yourself and to prevent puncturing the liner.

1. Move the liner and textile onto the pad at the centre of the tank prior to installing the wall sheets and the roof.

2. Tighten all roof hardware and sheets before lifting the tank and beginning installation of the second tier or other assembly activities.

3. Make sure all wall sheet bolts have the heads on the inside (with exception of the liner clamp bolts). Nothing should project inwards that might damage the liner.

4. All wall penetrations on the top tier of wall sheets should be cut and drilled before installing the liner.

5. Any other accessories should also be attached to the top tier or roof before installing the liner.

6. As the tank is lifted, place some form of blocks under the wall sheets to ensure safe egress of the tank.

4.6.7 Raising Water Tank:

The number of jacks to be used is best determined by experience. Always space jacks evenly around the tank. Factors such as water tank size, soil compaction, wind velocity, and jack design are to be considered when deciding how many to use. If in doubt, use a minimum of one jack per vertical seam. Ensure jacks have a capacity of five times the expected load or more. Securely fasten jack brackets to wall sheets using water tank bolts. Raise the water tank just high enough to assemble the next tier.

IMPORTANT:
When lifting the tank, crank all jacks at an equal rate. This will prevent bowing previously assembled tiers, and make hole alignment easier.

Lower the water tank onto foundation after assembling each tier and tighten bolts. Re-bolt jack brackets to the lowest ring, raise water tank, and continue assembly of wall sheets.

4.6.8 Shell Wind Ring Installation:

If your water tank is supplied with shell wind rings, follow the below instructions to avoid missing the correct location (tier) of the wind rings.

Install the first wind ring to the top tier sheet as close to the roof sheets as possible, avoiding contact with any other components.

1. Bolt the wind ring brackets to the tank at each vertical seam and centre of the wall sheet using 3/8 x 1” bolts and nuts.
2. Bolt the wind ring clamps to the bracket using 3/8 x 1” bolts and nuts.
3. Feed sections of pipe through the clamps around the tank, adding a pipe splice onto each end. Secure the pipe splice in place between two wind rings with a 3/8 x 3-3/4” bolt and nut.
4. Repeat steps 1-3 for any remaining wind rings, ensuring they are at the correct height.

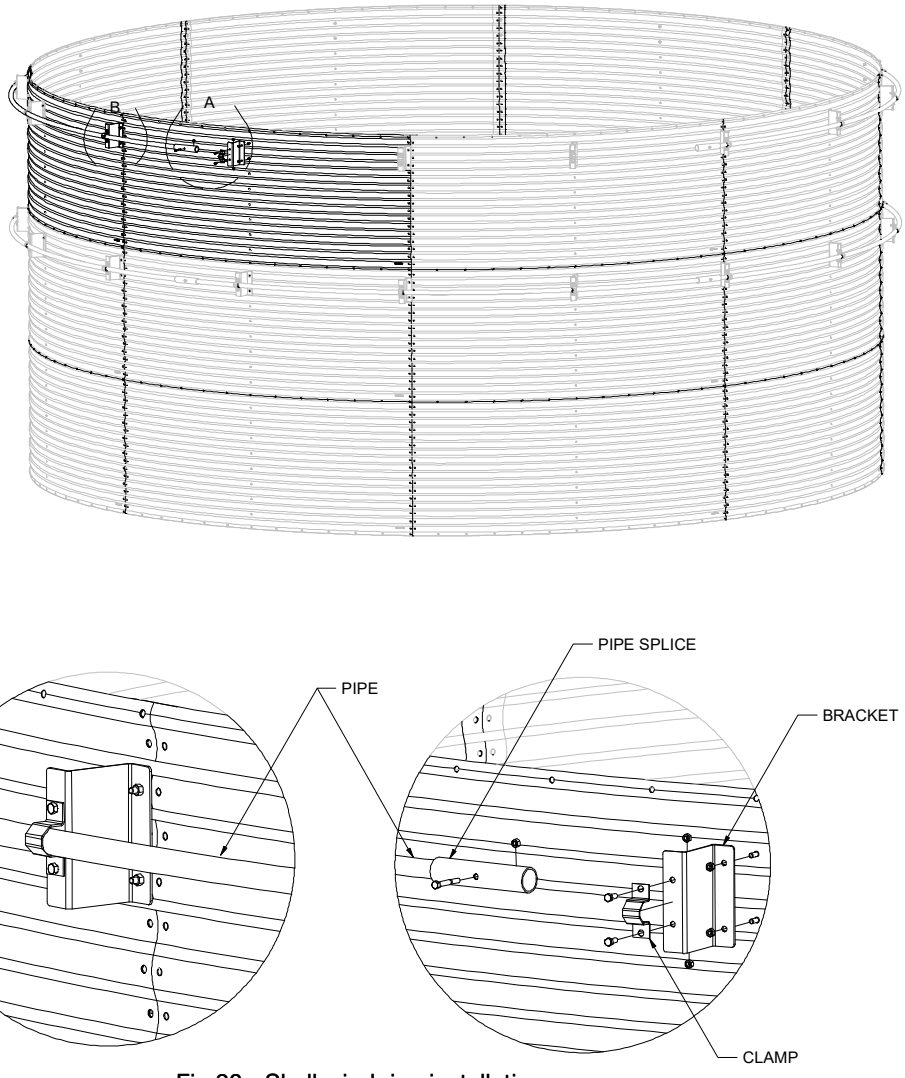


Fig 20 - Shell wind ring installation

4.6.9 Recommended Procedure for Wall Sheet Assembly on Small Diameter Tank:

The assembly of small diameter tanks can be very sensitive to bolt hole locations on mating sheets. Slight differences in diameter due to gauge thicknesses, or the spacing between mating sheets quickly becomes an issue with respects to misaligned wall sheet holes on seams. On tanks with larger diameters, this becomes less of an issue.

To minimize hole misalignment, follow these recommended steps:

1. Assemble the roof and top tier as described in Sections 4.5.2 and 4.6.5.

   Leave the bottom half of the vertical wall sheet seams loosely bolted (do not tighten bolts).

2. Lift the tank high enough to allow the next tier of sheets to be positioned on the inside of the upper tier, making sure to stagger the vertical seams. Adjust the lift height so that the holes on the lifted sheets align with the holes on the new sheets.

3. Position the top centre hole of the wall sheet being added with the vertical seam of the two mating elevated wall sheets. Using a tapered punch, capture all three mating wall sheets through that hole. Angle and rotate the punch to align and ream the holes. See Figure 20. Use another punch (or as many as necessary) in an adjacent hole to maintain alignment.

4. Insert a bolt in the hole next to the first punch, apply a nut and tighten immediately. Repeat on the other side of the punch, working your way outwards from this centre hole.
   - The spacing of the holes on the inner wall sheet will tend to get larger relative to the elevated wall sheet.
   - Use the punches on adjacent holes to keep alignment as you're installing bolts.
   - Ream the holes and pull the wall sheet back as necessary to keep a tight fit with the mating sheets.

5. Keep the last hole on either end of the bottom wall sheet open and repeat the procedure on the next sheet.

6. Use the same procedure with the punches and aligning adjacent holes to bolt together the upper half of the vertical seams of the lower wall sheets.

7. Once the horizontal seam is complete around the tank, tighten the bolts on the vertical seam of the elevated wall sheets that were previously left loose.

8. Continue working your way down the vertical seams of the lower wall sheets, remembering to keep the bottom half bolts of the seams loose to help with the next tier.

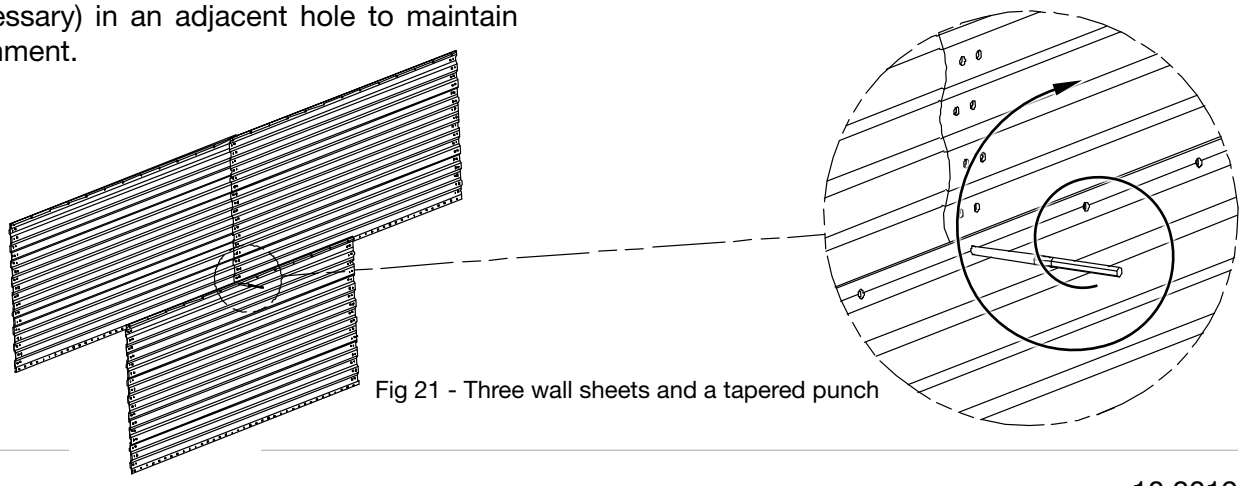


Fig 21 - Three wall sheets and a tapered punch

4.7 WATER TANK LINER INSTALLATION

Note:
The following instructions are the recommended procedure for ensuring a successful liner installation; however, it is ultimately the responsibility of the installer to ensure the liner is installed correctly without damage.

Note:
Meridian does not supply the liner. It must be obtained from a third party.

4.7.1 Roofed Water Tank:

1. The roof and first tier wall sheets (with liner clamps) should be assembled as per Sections 4.5.2 and 4.6.5, before starting liner installation.

2. Unfold the geotextile bag and find the top edge. There should be holes cut approximately every 12” around the circumference of the edge.

3. Remove liner clamps briefly to hang the bag from the bolts, and then put the clamps back in place but still leave the nut loose, working your way around the tank. Excess geotextile material should be left folded as a wrinkle.

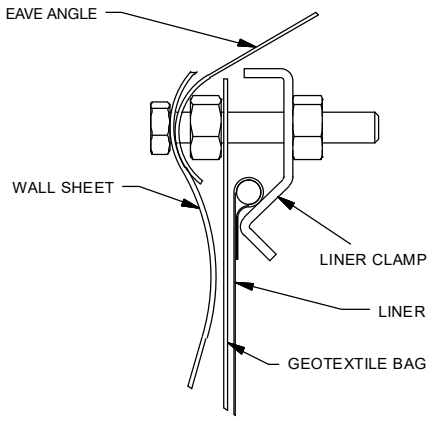


Fig 22 - Cross-section of liner/rope sandwiched between wall sheet and liner clamp

4. Unfold the liner and locate the top edge. There should a rope welded around the circumference of the edge.

5. Insert the rope under the liner clamp so that the liner is between the wall sheet and the “V” of the clamp. See Figures 21 and 22. Continue around the tank, leaving a slight but consistent excess of liner between liner clamps. Finger tighten the nuts but do not completely tighten.

6. Once you have gone around the entire tank, adjust the liner as needed to make sure it is evenly spaced between the liner clamps. Tighten the nuts so that the clamps are snug against the wall sheets and the liner cannot be pulled free.

Note:
While the tank is being assembled, the geotextile bag should keep the liner contained in the middle of the tank perimeter and out of the way.

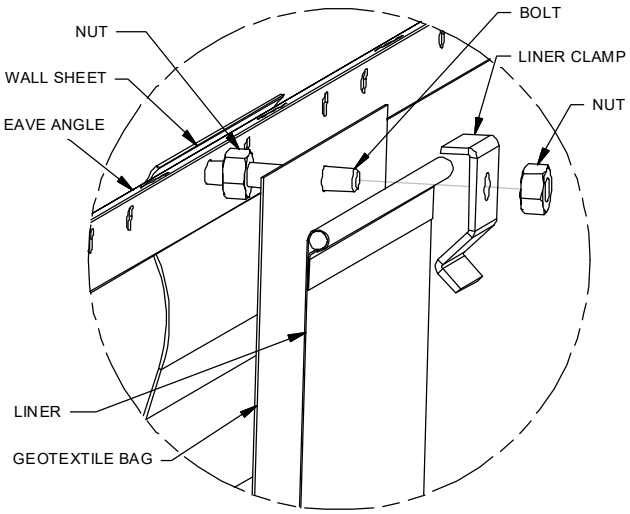


Fig 23 - Exploded view of liner/rope, wall sheet and liner clamp

7. When tank assembly is complete except for the last wall sheet, enter the tank between the wall sheets and the geotextile bag.

8. Pull the seam string or cut the tie straps on the geotextile bag. This opens the bottom of the geotextile bag and allows the liner to also open up properly. The geotextile should still be intact between the liner and the wall sheets, and between the liner and the foundation. This creates a buffer to protect the liner.

9. While still between the geotextile bag and the wall sheets, walk around the tank and pull the bag and liner closer to the perimeter of the tank, yet keeping them a couple of feet from where the wall sheets will sit. This allows the tank to be safely lowered without damaging the liner.

10. Lift the tank enough for safe egress and place blocks under each wall sheet to prop up the tank.

11. Install the final wall sheet and exit the tank. Lower the tank into place.

12. Once the tank is secured, it is necessary to enter the tank (inside the liner) to make adjustments to the liner, and finish installation of any tank penetrations, as required. Push excess liner to the bottom perimeter of the tank but keep a wrinkle in the liner. The liner should have room to move but not pull down on the liner clamps when the tank is filled for the first time.

Note:
When entering the tank, make sure to wear footwear that will not damage the liner and to use a ladder with protected feet.

4.7.2 Open-Top Water Tank:

1. Unfold the geotextile bag and find the top edge. There should be holes cut approximately every 12” around the circumference of the edge.

2. While installing the top angle around the tank, also hang the geotextile bag on the bolts, drape the liner slightly over the top angle, and lastly secure the top clamp with the nut by hand.

3. With the components finger tightened in place, ensure any excess geotextile is left folded as a wrinkle and adjust the liner as needed so that it is evenly spread out.

4. With the geotextile bag and liner properly adjusted, tighten the nuts so that the bag and liner cannot be pulled free.

5. Insert Tek® screws through the top clamp, liner, and top angle to hold the liner in place.

6. Trim any excess liner hanging over the top angle as required.

IMPORTANT:
See steps 7 - 12 from Section 4.7.1 to finish the liner install

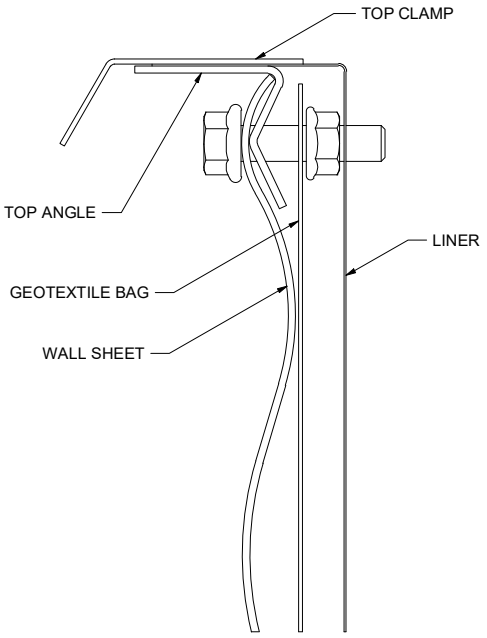


Fig 24 - Cross-section of open-top liner installation

4.8 WATER TANK SIGN INSTALLATION

The water tank sign may be installed on the wall sheet prior to bolting that sheet to the tank.

1. Select a location that is in a high visibility area.

2. Wipe down the wall sheet to remove oil and dirt.

3. Mark two locations on the wall sheet for holes on the “peak” of a corrugation, using the water tank sign as a template.

4. Using those marks, drill two holes.

5. Using 3/8 x 3/4” bolts and nuts attach the sign to the wall sheet. Remember to have the bolt heads on the inside of the water tank.

Note:
The sign must be installed to identify the product and validate the warranty.

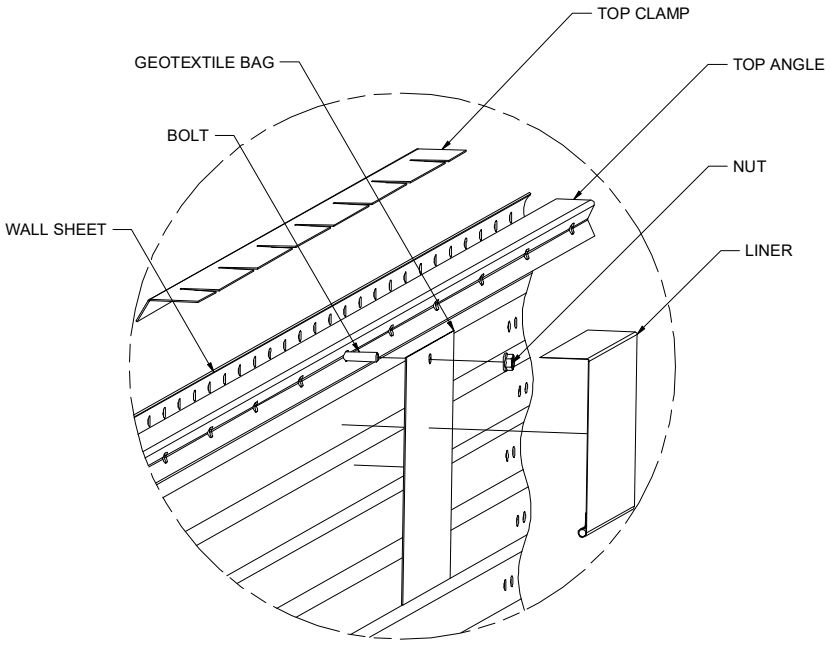


Fig 25 - Exploded view of open-top liner installation

4.9 BASE ANGLE AND ANCHOR CHAIRS

4.9.1 Base Ring Angle:

Bolt base ring angles to the lower inside edge of the bottom tier of wall sheets using 3/8 x 3/4" bolts and nuts. Ensure bolt heads are located on the **inside** of the water tank with the nuts on the outside and that the bottom flange of the angle faces towards the outside of the tank.
See Figure 23.

Match up the ends of the base ring angles over the centre of the wall sheets so that base ring angle seams do not overlap with wall sheet seams.

4.9.2 Anchor Chairs:

1. Bolt anchor chairs at the wall sheet vertical seams with 3/8 x 1-1/2" bolts and nuts. See Figure 24.

2. Customer is responsible for acquiring suitable anchor bolts as per a foundation engineers analysis.

   When installing anchor bolts, ensure they are installed in a position to allow slight expansion of the tank upon initial filling.

Fig 26 - Bolt base ring angle to wall sheet.

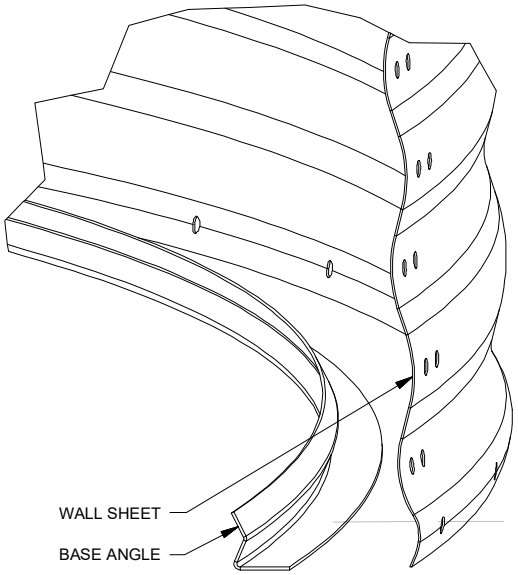
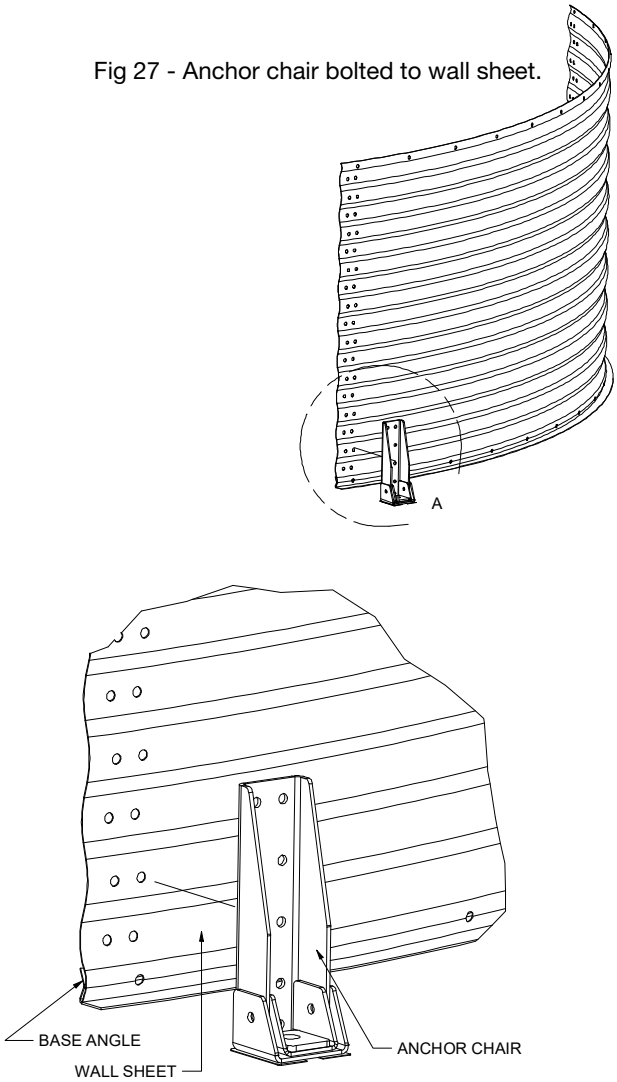


Fig 27 - Anchor chair bolted to wall sheet.



4.10 TECHNIQUES FOR TANK JACKS

- Jacks should be evenly spaced around the tank, using a minimum of one jack per wall sheet.
- Each jack should have a capacity five times the expected load.
- Fabricate custom lifting lugs to fit the assembly equipment. Each lug should have a capacity 5 times the expected load.
- Anchor each jack securely, using guy-wires if necessary, to stabilize.
- Use a minimum of four 3/8 x 1-1/4” Grade 8 bolts, to fasten each lug. Bolts are not supplied by Meridian.

4.11 OPTIONAL ACCESSORIES

4.11.1 Fitting Wall Flange:

A corrugated flange complete with welded nipple assembly can be purchased for overflow, inlet, outlet, or other penetration fitting requirements. Flange kits come with all hardware required and their own set of installation instructions.

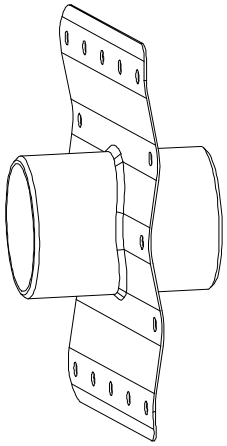


Fig 28 - Wall flange

Table 5 - Fitting Wall Flange Kits

SIZE	PART #
2”	13000008865
4”	13000008866
6”	13000008867
8”	13000008868
10”	13000008869
12”	13000008870

4.11.2 Anti-Vortex Assembly Kit:

Local codes or tank applications may require an anti-vortex assembly kit. The kits come with all hardware required (including a wall flange) and their own set of installation instructions.

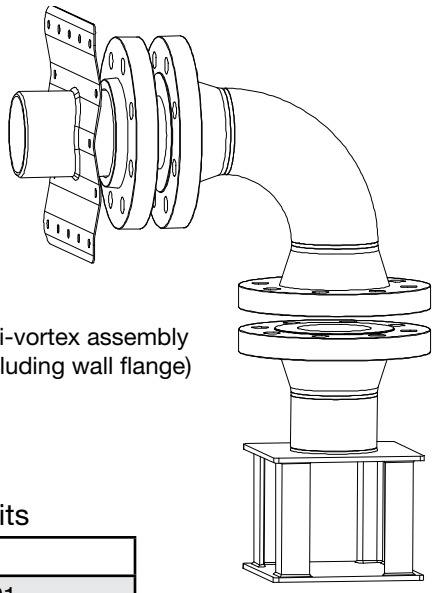


Fig 29 - Anti-vortex assembly (including wall flange)

Table 6 - Anti-Vortex Assembly Kits

SIZE	PART #
4”	13000008401
6”	13000008503
8”	13000008520
10”	13000008546

4.11.3 Roof Manway Assembly Kit (TCEQ):

An accessory roof manway kit designed for compliance with Texas Commission on Environmental Quality standards. The manway kit comes with all hardware required and its own set of installation instructions.

Table 7 - Roof Manway Kits

PART #	DESCRIPTION
130000011875	Manway Roof 30"/15'
130000011510	Manway Roof 30"/18'
130000011870	Manway Roof 30"/21'
130000011927	Manway Roof 30"/24'
130000011926	Manway Roof 30"/27'
130000011922	Manway Roof 30"/30-48'

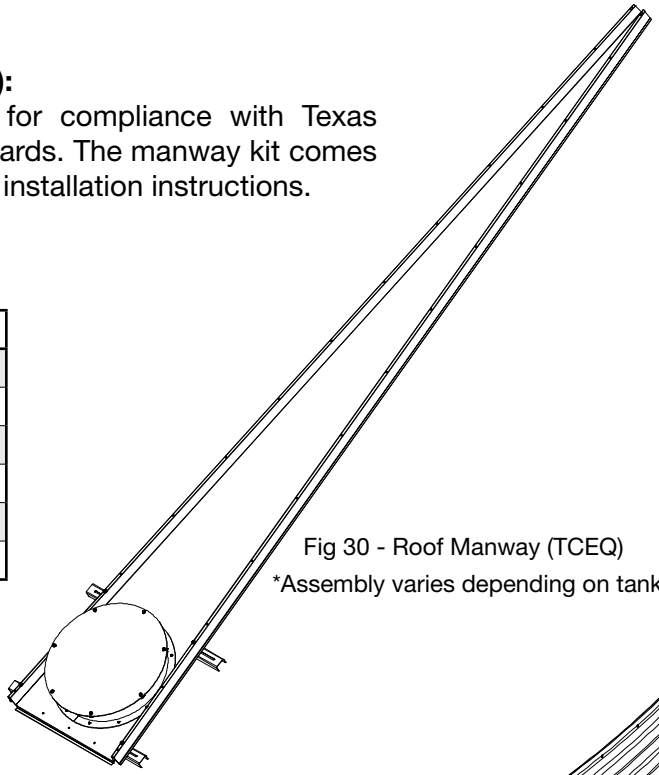


Fig 30 - Roof Manway (TCEQ)
*Assembly varies depending on tank size

4.11.4 Bolted Shell Manway:

A bolted shell manway allowing side access to the tank with a food grade finish. Bolted manways come with all hardware required and their own set of installation instructions.

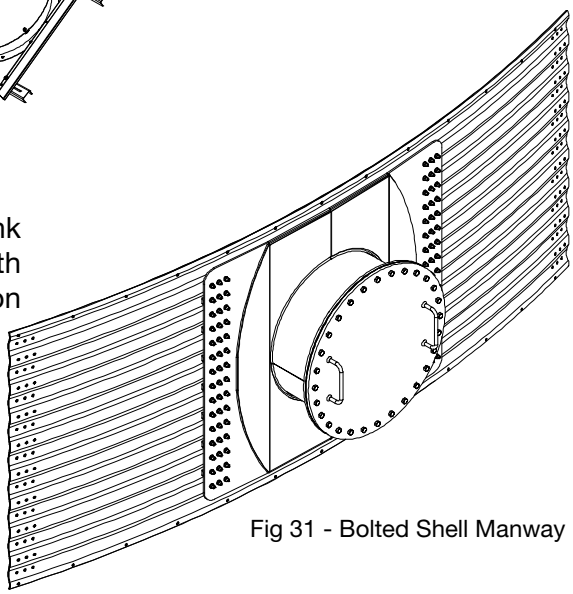


Fig 31 - Bolted Shell Manway

Table 8 - Bolted Shell Manway Kits

PART #	DESCRIPTION
130000012613	Bolted Shell Manway 29”/15’ Dbl Hole
130000012614	Bolted Shell Manway 29”/18’ Dbl Hole
130000012615	Bolted Shell Manway 29”/21’ Dbl Hole
130000012616	Bolted Shell Manway 29”/24’ Dbl Hole
130000012617	Bolted Shell Manway 29”/27’ Dbl Hole
130000012618	Bolted Shell Manway 29”/30’ Dbl Hole
130000012619	Bolted Shell Manway 29”/33’ Dbl Hole
130000012620	Bolted Shell Manway 29”/36’ Dbl Hole
130000012621	Bolted Shell Manway 29”/39’ Dbl Hole
130000012622	Bolted Shell Manway 29”/42’ Dbl Hole
130000012623	Bolted Shell Manway 29”/48’ Dbl Hole

PART #	DESCRIPTION
130000012472	Bolted Shell Manway 29”/15’ Trpl Hole
130000012473	Bolted Shell Manway 29”/18’ Trpl Hole
130000012474	Bolted Shell Manway 29”/21’ Trpl Hole
130000012476	Bolted Shell Manway 29”/24’ Trpl Hole
130000012481	Bolted Shell Manway 29”/27’ Trpl Hole
130000012482	Bolted Shell Manway 29”/30’ Trpl Hole
130000012483	Bolted Shell Manway 29”/33’ Trpl Hole
130000011947	Bolted Shell Manway 29”/36’ Trpl Hole
130000012484	Bolted Shell Manway 29”/39’ Trpl Hole
130000012485	Bolted Shell Manway 29”/42’ Trpl Hole
130000012486	Bolted Shell Manway 29”/48’ Trpl Hole

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Section 5: PARTS

5.1 ROOF

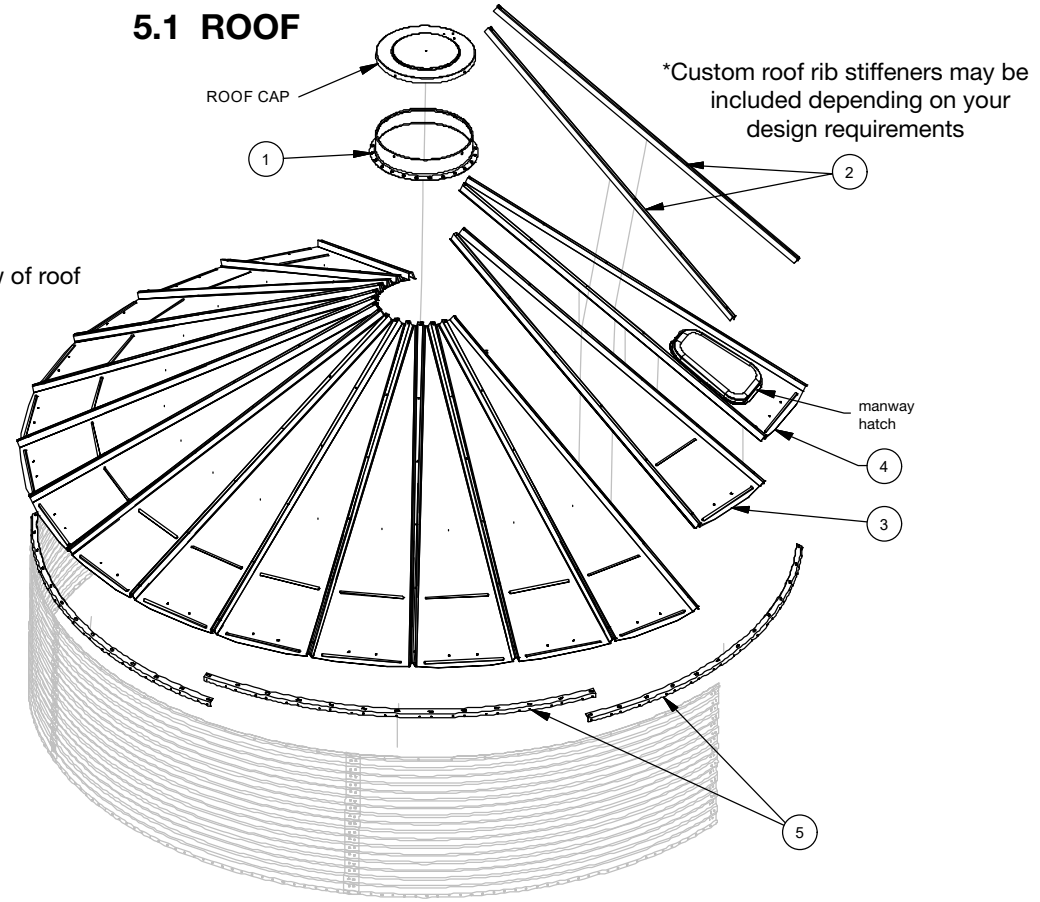

Fig 32 - Exploded view of roof

Table 9 - Roof Parts List

ITEM	PART #	DESCRIPTION	QUANTITY
1	217818	Peak Ring (Ø 6’ – Ø 27’)	1
	Varies	Peak Ring (Ø 30’ – Ø 42’)	1
	3020102588	Peak Ring (Ø 48’)	1
2	301XX02050	Roof Rib Stiffener (Ø 15’ – Ø 27’)	2
	302XX02050	Roof Rib Stiffener (Ø 12’, Ø 30’ – Ø 48’)	2
3	301XX02000	Sheet – Roof – Standard (Ø 15’ – Ø 27’)	23
	302XX02000	Sheet – Roof – Standard (Ø 30’ – Ø 48’)	XX
	602XX02000	Sheet – Roof – (Ø 6’ – Ø 12’)	4, 7, 12
4	301XX02004	Sheet – Roof – Manway (Ø 12’ – Ø 27’)	1
	302XX02004	Sheet – Roof – Manway (Ø 12’, Ø 30’ – Ø 48’)	1
	6010902004	Sheet - Roof - Manway (Ø 9’)	1
5	Varies	Eave Angle (Ø 6’ – Ø 48’)	Varies

* ‘XX’ represents nominal water tank diameter

5.2 ROOF STIFFENING RING

Fig 33 - Roof stiffening ring

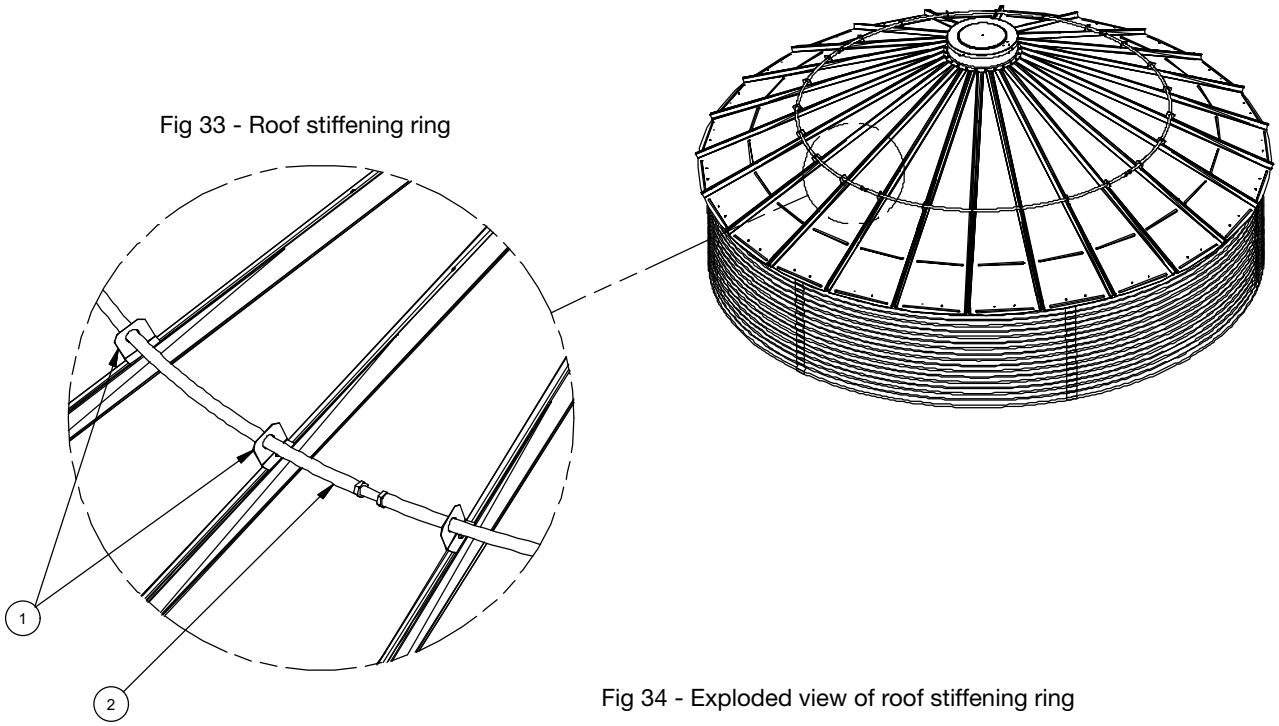

Fig 34 - Exploded view of roof stiffening ring

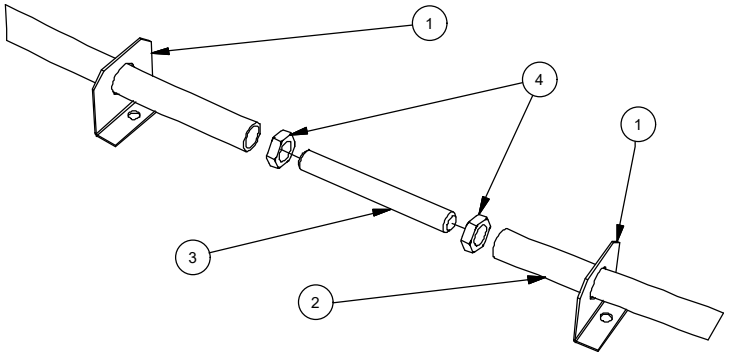

Table 10 - Roof Stiffening Ring Parts List

ITEM	PART #	DESCRIPTION	QUANTITY
1	3020102042	Exterior Ring Support Bracket	Varies
2	3020102053	Roof Stiffening Ring - Ø 36’	12
	3020102045	Roof Stiffening Ring – Ø 24’	8
	3020102049	Roof Stiffening Ring – Ø 21’	7
	3020102047	Roof Stiffening Ring – Ø 18’	6
	3020102048	Roof Stiffening Ring – Ø 6’	2
3	3020102050	Expansion Bolt 3/4” x 6”	Varies
4	13072500012	Hex Nut 3/4”	Varies
5	3020102041	Interior Ring Support Bracket	Varies

5.3 ROOF CAP

Fig 35 - Small roof cap assembly

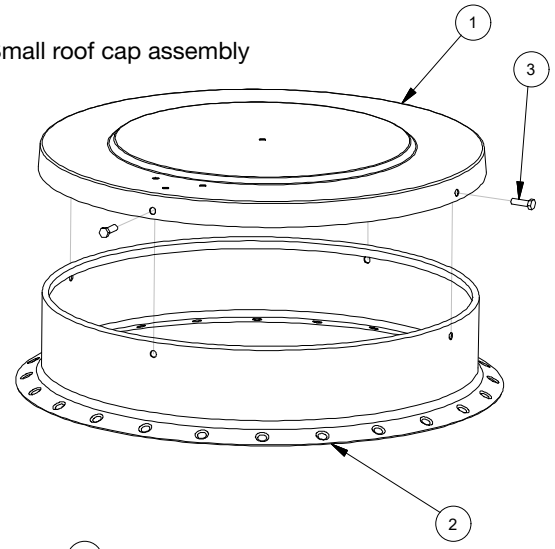

Fig 36 - Large roof cap assembly

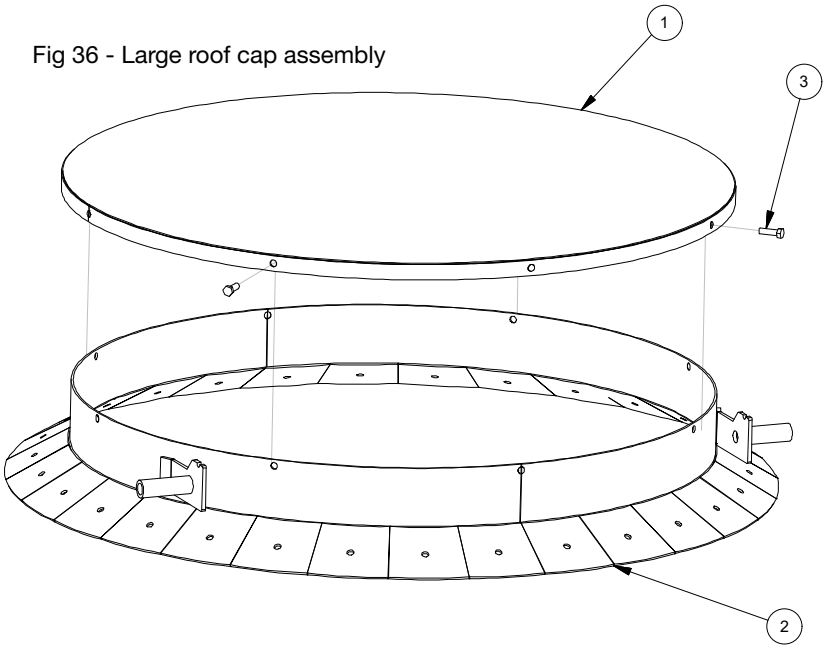

Table 11 - Roof Cap Parts List

ITEM	PART #	DESCRIPTION	QUANTITY
1	517522A	Roof Cap (Ø 6’ – Ø 27’)	1
	3020102572	Roof Cap (Ø 30’ – Ø 42’)	1
	130000010265	Roof Cap (Ø 48’)	1
2	217818	Peak Ring (Ø 6’ – Ø 27’)	1
	Varies	Peak Ring (Ø 30’ – Ø 42’)	1
	3020102588	Peak Ring (Ø 48’)	1
3	3071604057	Bin Bolt and Nut – 3/8 x 1-1/4 c/w LDPE washer	4

5.4 MANWAY HATCH LID

Fig 37 - Exploded view of manway hatch lid assembly

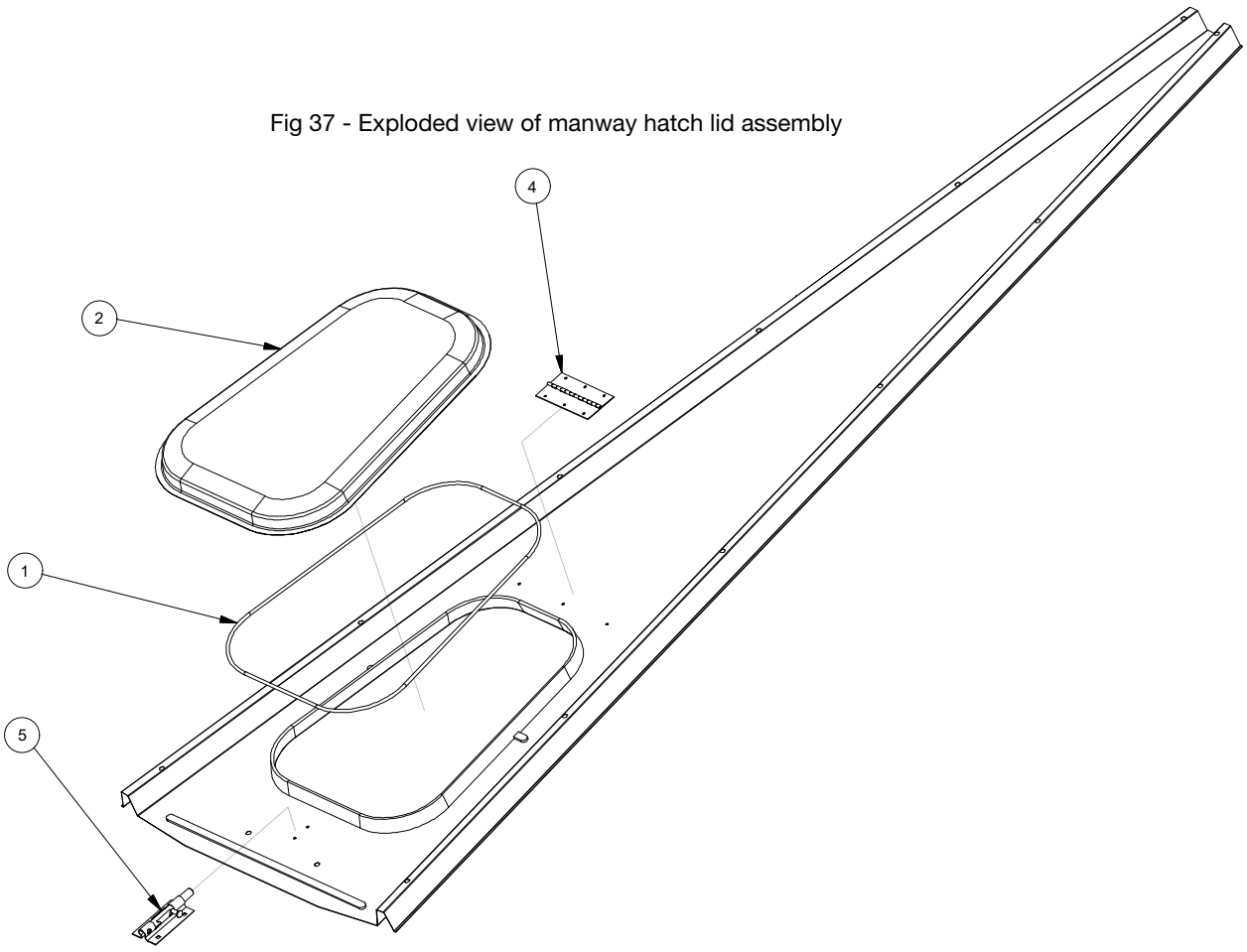

Table 12 - Manway Hatch Lid Parts List

ITEM	PART #	DESCRIPTION	QUANTITY
1	2020300093	Manway Gasket	1
2	3020102016	Manway Cover	1
3	3073201025	3/16” Rivet	10
4	3020102015	Hinge	1
5	3020102577	Lockable Padbolt	1
	3020102018	Latch Barrel Bolt	1

5.5 ROOF LADDER

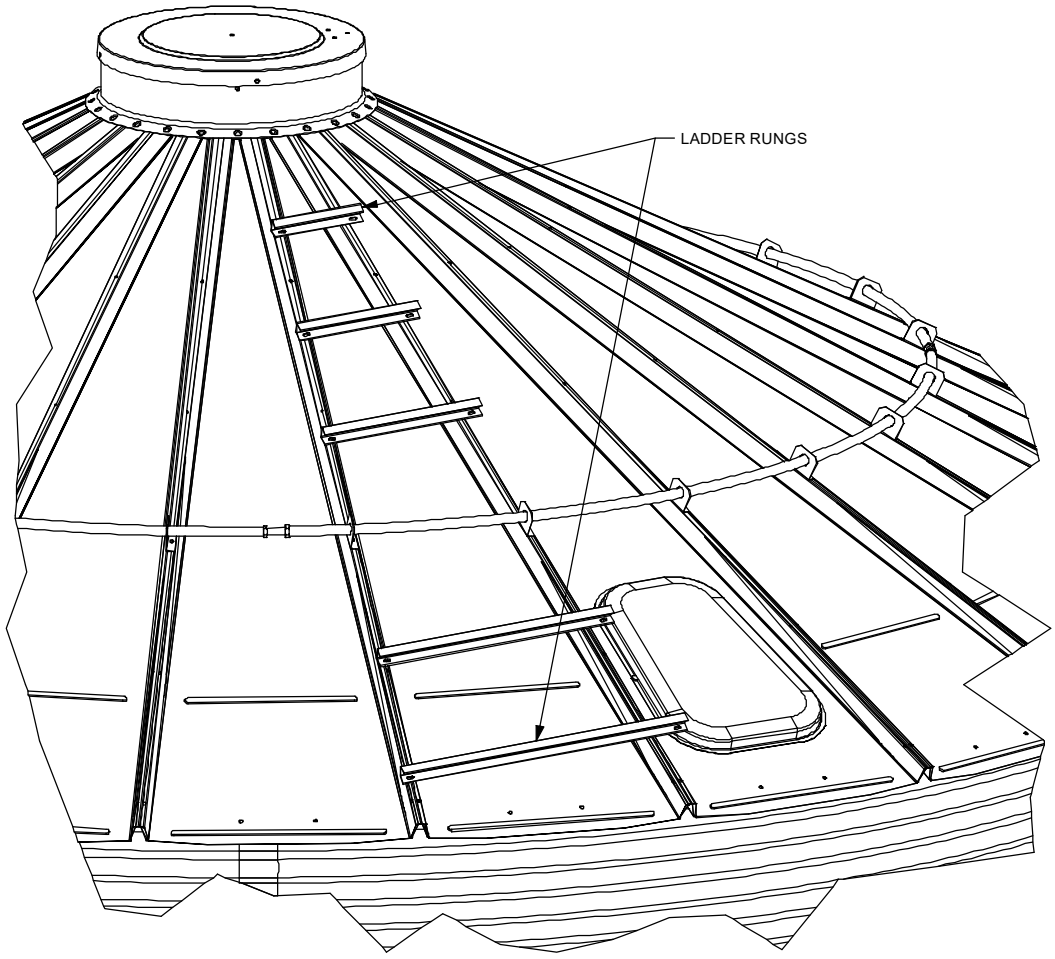

Fig 38 - Roof ladder

Table 13 - Roof Ladder Parts List

ITEM	PART #	DESCRIPTION	9'	12'	15'	18'	21'	24'	27'	30'	33'	36'	42'	48'
			130000010478	130000010479	3021503003	3021803003	3022103003	3022403003	3022703003	3023003003	3023303003	3023603003	3024203003	3024803003
1	3020102067	Ladder Rung 7-1/8"											1	1
2	3020102068	Ladder Rung 8"										1		
3	3020100070	Ladder Rung 8-7/5"		1							1			
4	3020102071	Ladder Rung 9-5/8"								1			1	
5	3020102073	Ladder Rung 11"			1	1	1	1	1			1		1
6	3020100076	Ladder Rung 12-1/4"	1								1			
7	3020102075	Ladder Rung 12-1/2"											1	
8	3020102079	Ladder Rung 13-3/8"								1				1
9	3020102081	Ladder Rung 14"										1		
10	3020102087	Ladder Rung 15-3/4"			1	1	1	1	1		1		1	1
11	3020102090	Ladder Rung 17-1/8"								1		1		
12	3020102091	Ladder Rung 18-1/4"									1		1	1
13	3020102096	Ladder Rung 20-1/2"		1	1	1	1	1	1	1		1	1	
14	3020102100	Ladder Rung 22-1/2"									1			
15	3020102110	Ladder Rung 23-1/2"										1		1
16	3020102104	Ladder Rung 25 1/8"				1	1	1	1					
17	3020102107	Ladder Rung 26"											1	1
18	3020102114	Ladder Rung 28-5/8"	1							1	1		1	1
19	3020102118	Ladder Rung 29-7/8"		1		1	1	1	1			1		1
20	3020102120	Ladder Rung 31"								1			1	
21	3020102125	Ladder Rung 32-3/8"									1			
22	3020102126	Ladder Rung 33-1/8"										1		
23	3020102130	Ladder Rung 34-1/2"					1	1	1				1	
24	3020102132	Ladder Rung 35-1/8"								1				1
25	3020102140	Ladder Rung 36-1/8"									1	1	1	
26	3020102142	Ladder Rung 37-1/8"												1
27	3020102145	Ladder Rung 39-1/4"		1				1	1	1	1	1	1	1
28	130000010486	Ladder Rung 42-9/16"	1											
28	3020102153	Ladder Rung 44"							1					

5.6 SHELL WIND RING

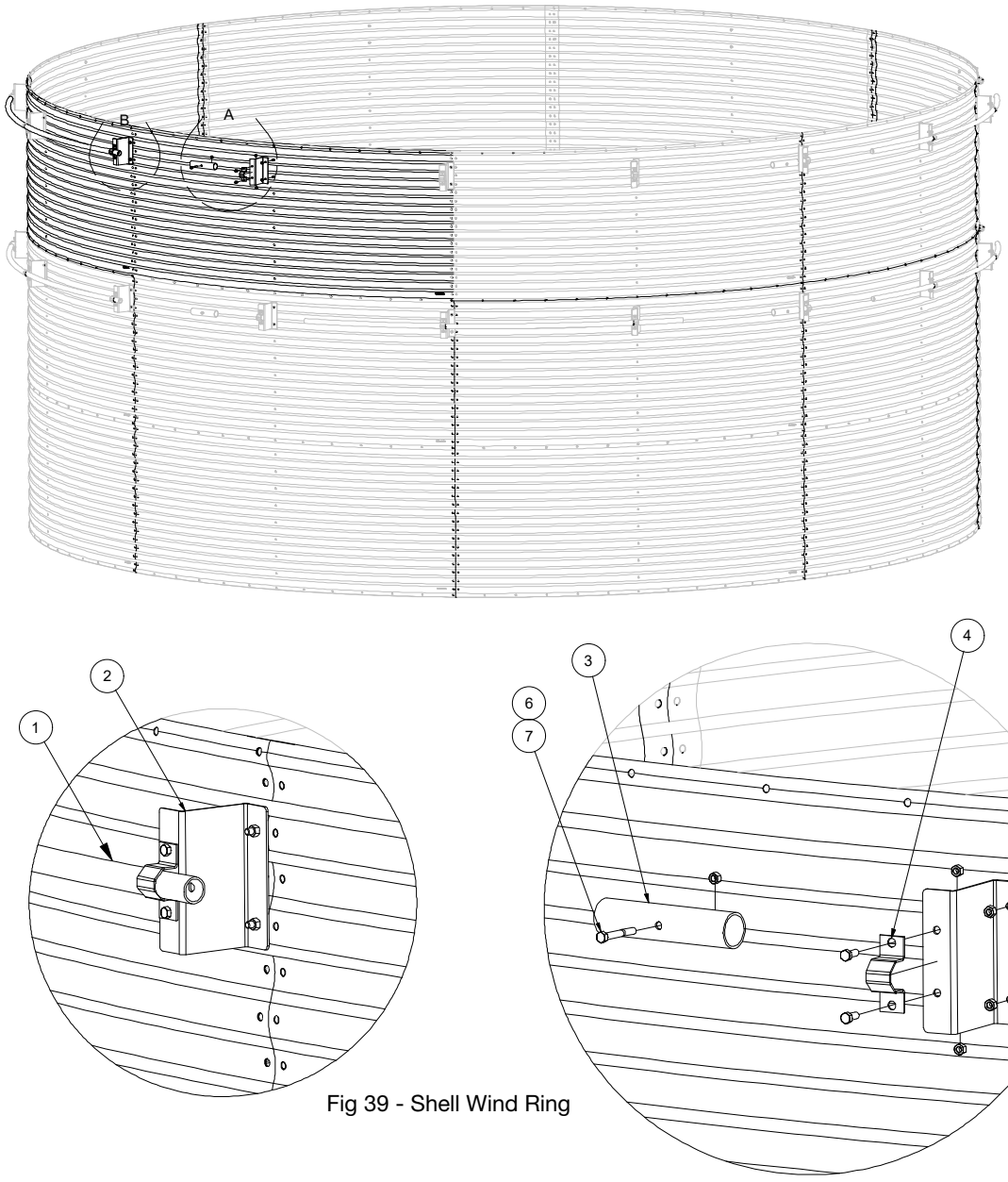

Fig 39 - Shell Wind Ring

Table 14 - Shell Wind Ring

ITEM	PART #	DESCRIPTION
1	Varies	Pipe Wind Ring
2	130000012319	Wind Ring Bracket
3	3020102631	Splice Wind Ring
4	3020102544	Clamp - Wind Ring
5	13070206016	Hex Cap Screw 3/8 x 1-16 Gr 5
6	13072500006	Hex Nut 3/8-16 Gr 5
7	13070206044	Hex Cap Screw 3/8 x 2 3/4-16 Gr 5

5.7 HARDWARE WHERE USED

Table 15 - Hardware Where Used

CONNECTION LOCATION	3/8" BOLT						3/8" NUT	3/8" WASHER
	3/4"	1-1/4"	1-1/2"	2-1/2"	3"	4"		
ROOF								
Roof Panel to Peak Ring		X					X	
Roof Panel to Eave Angle	X						X	X
Roof Panel Rib to Roof Panel Rib		X					X	
Roof Panel Rib to Roof Stiffening Ring Bracket		X					X	
Roof Panel Rib to Eave Angle (15-27')					X		X	
Roof Panel Rib to Eave Angle (6-12', 30-48')						X	X	
Roof Cap to Peak Ring		X						
ROOF LADDER								
Ladder Rung to Roof Panel Rib		X					X	
Ladder Rung to Roof Panel Rib (at eave) 15-27'					X		X	
Ladder Rung to Roof Panel Rib (at eave) 6-12', 30-48'						X	X	
WALL SHEETS								
Wall Sheet to Eave Angle	X						X	X
Eave Angle to Liner Clamp				X				
Wall Sheet to Wall Sheet	X						X	
Wall Sheet to Anchor Chair		X					X	
Wall Sheet to Base Ring Angle	X						X	

5.8 RECOMMENDED BOLT ASSEMBLY

When tightening bolts, tighten the nut (NOT the bolt) until a "snug-tightened condition" is achieved. This is defined in **Specification for Structural Joints Using ASTM A325 or A490 Bolts (June 2004)** as:

> "The snug-tightened condition is the tightness that is attained with a few impacts of an impact wrench or the full effort of an ironworker using an ordinary spud wrench to bring the connected plies into **firm contact**."

Properly tightening the bolt will result in compressing the sealing washer noticeably. This is a requirement and all assembly crew members must be made aware of how to achieve a "snug-tightened condition" using common building tools. See Table 16 for minimum impact gun torque capacity necessary to achieve "snug-tightened condition" for bolts in the assembly process.

If caulking is being used at any joints, it is important that the bolts are tightened enough to squeeze the caulking and bring the surfaces of the parts into firm contact with each other. This is especially important to monitor when installing bolts in temperatures approaching -10°C (14°F).

Do not substitute bolts in place of those supplied by Meridian.

ALWAYS TIGHTEN THE NUT,
NOT THE BOLT!

Table 16 - Recommended Impact Gun Torque Capacity for Snug-Tightened Condition Bolts

BOLT DIAMETER (in)	BOLT GRADE	GRADE MARK	RECOMMENDED TORQUE CAPACITY		
			in-lb	ft-lb	Nm
3/8	8.2		520	43	58

5.9 APPENDIX A: WALL SHEET LAYOUTS

Table 17 - Wall Sheet Layouts (Standard Water Tanks with 30° Roof)

NOMINAL TANK DIA. (FT)	PART #	GAUGES PER RING (RING 1 = TOP)								
		RING 1	RING 2	RING 3	RING 4	RING 5	RING 6	RING 7	RING 8	RING 9
6	6020602001	20								
	6020602002	20	20							
	6020602003	20	20	20						
	6020602004	20	20	20	20					
	6020602005	20	20	20	20	20				
	6020602006	20	20	20	20	20	20			
	6020602007	20	20	20	20	20	20	20		
	6020602008	20	20	20	20	20	20	20	20	
	6020602009	20	20	20	20	20	20	20	20	20
9	6020902001	20								
	6020902002	20	20							
	6020902003	20	20	20						
	6020902004	20	20	20	20					
	6020902005	20	20	20	20	20				
	6020902006	20	20	20	20	20	20			
	6020902007	20	20	20	20	20	20	18		
	6020902008	20	20	20	20	20	20	20	18	
	6020902009	20	20	20	20	20	20	20	18	18
12	6021202001	20								
	6021202002	20	20							
	6021202003	20	20	20						
	6021202004	20	20	20	20					
	6021202005	20	20	20	20	20				
	6021202006	20	20	20	20	20	18			
	6021202007	20	20	20	20	20	18	17		
	6021202008	20	20	20	20	20	18	17	16	
	6021202009	20	20	20	20	20	18	17	16	15
15	6021502001	20								
	6021502002	20	20							
	6021502003	20	20	20						
	6021502004	20	20	20	20					
	6021502005	20	20	20	20	18				
	6021502006	20	20	20	20	18	17			
	6021502007	20	20	20	20	18	17	15		
	6021502008	20	20	20	20	18	17	15	14	
	6021502009	20	20	20	20	18	17	15	14	13

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NOMINAL TANK DIA. (FT)	PART #	GAUGES PER RING (RING 1 = TOP)								
		RING 1	RING 2	RING 3	RING 4	RING 5	RING 6	RING 7	RING 8	RING 9
18	6021802001	20								
	6021802002	20	20							
	6021802003	20	20	20						
	6021802004	20	20	20	18					
	6021802005	20	20	20	18	17				
	6021802006	20	20	20	18	17	15			
	6021802007	20	20	20	18	17	15	13		
	6021802008	20	20	20	18	17	15	14	13	
	6021802009	20	20	20	18	17	15	14	13	12
21	6022102001	20								
	6022102002	20	20							
	6022102003	20	20	18						
	6022102004	20	20	20	17					
	6022102005	20	20	20	17	15				
	6022102006	20	20	20	17	15	13			
	6022102007	20	20	20	17	15	14	13		
	6022102008	20	20	20	17	15	14	13	1616	
	6022102009	20	20	20	17	15	14	13	12	1616
24	6022402001	20								
	6022402002	20	20							
	6022402003	20	20	18						
	6022402004	20	20	18	16					
	6022402005	20	20	18	16	14				
	6022402006	20	20	18	16	14	13			
	6022402007	20	20	18	16	14	13	1616		
	6022402008	20	20	18	16	14	13	12	1616	
	6022402009	20	20	18	16	14	13	12	1616	1515
27	6022702001	20								
	6022702002	20	20							
	6022702003	20	20	18						
	6022702004	20	20	18	15					
	6022702005	20	20	18	15	13				
	6022702006	20	20	18	15	13	12			
	6022702007	20	20	18	15	13	12	1616		
	6022702008	20	20	18	15	13	12	1616	1515	
	6022702009	20	20	18	15	13	12	1616	1515	1414
30	6023002001	20								
	6023002002	20	20							
	6023002003	20	20	17						
	6023002004	20	20	17	14					
	6023002005	20	20	17	14	12				
	6023002006	20	20	17	14	13	1616			
	6023002007	20	20	17	14	13	1616	1515		
	6023002008	20	20	17	14	13	1616	1515	1414	
	6023002009	20	20	17	14	13	1616	1515	1414	1313

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NOMINAL TANK DIA. (FT)	PART #	GAUGES PER RING (RING 1 = TOP)								
		RING 1	RING 2	RING 3	RING 4	RING 5	RING 6	RING 7	RING 8	RING 9
33	6023302001	20								
	6023302002	20	18							
	6023302003	20	18	16						
	6023302004	20	18	16	13					
	6023302005	20	18	16	13	12				
	6023302006	20	18	16	13	12	15			
	6023302007	20	18	16	13	12	1616	1414		
	6023302008	20	18	16	13	12	1616	1414	1313	
	6023302009	20	18	16	13	12	1616	1414	1313	1212
36	6023602001	20								
	6023602002	20	18							
	6023602003	20	18	15						
	6023602004	20	18	15	13					
	6023602005	20	18	15	13	1616				
	6023602006	20	18	15	13	1616	1515			
	6023602007	20	18	15	13	1616	1515	1313		
	6023602008	20	18	15	13	1616	1515	1313	1313	
	6023602009	20	18	15	13	1616	1515	1313	1313	1212
39	6023902001	20								
	6023902002	20	18							
	6023902003	20	18	14						
	6023902004	20	18	14	12					
	6023902005	20	18	14	12	1616				
	6023902006	20	18	14	12	1616	1414			
	6023902007	20	18	14	12	1616	1414	1313		
	6023902008	20	18	14	12	1616	1414	1313	1212	
42	6024202001	20								
	6024202002	20	17							
	6024202003	20	17	13						
	6024202004	20	17	14	1616					
	6024202005	20	17	14	12	1515				
	6024202006	20	17	14	12	1515	1313			
	6024202007	20	17	14	12	1515	1313	1212		
	6024202008	20	17	14	12	1515	1313	1313	1212	
48	6024802001	20								
	6024802002	20	16							
	6024802003	20	16	13						
	6024802004	20	16	13	1616					
	6024802005	20	16	13	1616	1414				
	6024802006	20	16	13	1616	1414	1313			
	6024802007	20	16	13	1616	1414	1313	1212		

5.10 APPENDIX B: WATER TANK SPECIFICATIONS

Table 18 - Water Tank Specifications

MODEL	PART #	ACTUAL DIAMETER		HEIGHT					VOLUME							
				WALL SHEETS		ROOF	TOTAL*		NOM				PER INCH FB			
		(in)	(m)	(in)	(m)	(in)	(in)	(m)	(ft^3)	(Imp Gal)	(USG)	(bbl)	(ft^3)	(Imp Gal)	(USG)	(bbl)
601	6020602001	72.184	1.83	45.945	1.17	17.650	63.595	1.62	108	677	813	19	2	14	17	0
602	6020602002			91.220	2.32		108.871	2.77	216	1345	1616	38				
603	6020602003			136.496	3.47		154.146	3.92	323	2013	2418	57				
604	6020602004			181.772	4.62		199.422	5.07	430	2681	3220	76				
605	6020602005			227.047	5.77		244.697	6.22	537	3349	4022	95				
606	6020602006			272.323	6.92		289.973	7.37	644	4017	4824	114				
607	6020602007			317.598	8.07		335.249	8.52	752	4684	5626	133				
608	6020602008			362.874	9.22		380.524	9.67	859	5352	6428	153				
609	6020602009			408.150	10.37		425.800	10.82	966	6020	7230	172				
901	6020902001	108.275	2.75	45.945	1.17	28.042	73.987	1.88	244	1524	1831	43	5	33	39	0
902	6020902002			91.220	2.32		119.263	3.03	486	3027	3636	86				
903	6020902003			136.496	3.47		164.539	4.18	727	4530	5440	129				
904	6020902004			181.772	4.62		209.814	5.33	968	6033	7245	172				
905	6020902005			227.047	5.77		255.090	6.48	1209	7535	9050	215				
906	6020902006			272.323	6.92		300.365	7.63	1451	9038	10854	258				
907	6020902007			317.598	8.07		345.641	8.78	1692	10541	12659	301				
908	6020902008			362.874	9.22		390.916	9.93	1933	12043	14464	344				
909	6020902009			408.150	10.37		436.192	11.08	2174	13546	16268	387				
1201	6021202001	144.367	3.67	45.945	1.17	38.435	84.380	2.14	435	2710	3255	77	9	59	70	1
1202	6021202002			91.220	2.32		129.655	3.29	864	5382	6464	153				
1203	6021202003			136.496	3.47		174.931	4.44	1293	8053	9672	230				
1204	6021202004			181.772	4.62		220.206	5.59	1721	10725	12880	306				
1205	6021202005			227.047	5.77		265.482	6.74	2150	13396	16089	383				
1206	6021202006			272.323	6.92		310.758	7.89	2579	16068	19297	459				
1207	6021202007			317.598	8.07		356.033	9.04	3008	18739	22505	535				
1208	6021202008			362.874	9.22		401.309	10.19	3437	21411	25714	612				
1209	6021202009			408.150	10.37		446.584	11.34	3866	24082	28922	688				
1501	6021502001	180.459	4.58	45.945	1.17	48.827	94.772	2.41	680	4235	5087	121	14	92	110	2
1502	6021502002			91.220	2.32		140.048	3.56	1350	8410	10100	240				
1503	6021502003			136.496	3.47		185.323	4.71	2020	12584	15113	359				
1504	6021502004			181.772	4.62		230.599	5.86	2690	16758	20126	479				
1505	6021502005			227.047	5.77		275.874	7.01	3360	20932	25139	598				
1506	6021502006			272.323	6.92		321.150	8.16	4030	25107	30152	717				
1507	6021502007			317.598	8.07		366.426	9.31	4700	29281	35165	837				
1508	6021502008			362.874	9.22		411.701	10.46	5371	33455	40178	956				
1509	6021502009			408.150	10.37		456.977	11.61	6041	37629	45191	1075				

* To the top of the peak ring

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MODEL	PART #	ACTUAL DIAMETER		HEIGHT					VOLUME							
				WALL SHEETS		ROOF	TOTAL*		NOM				PER INCH FB			
		(in)	(m)	(in)	(m)	(in)	(in)	(m)	(ft^3)	(Imp Gal)	(USG)	(bbl)	(ft^3)	(Imp Gal)	(USG)	(bbl)
1801	6021802001	216.551	5.50	45.945	1.17	59.219	105.164	2.67	979	6099	7325	174	21	132	159	3
1802	6021802002			91.220	2.32		150.440	3.82	1944	12110	14544	346				
1803	6021802003			136.496	3.47		195.715	4.97	2909	18121	21762	518				
1804	6021802004			181.772	4.62		240.991	6.12	3874	24132	28981	690				
1805	6021802005			227.047	5.77		286.267	7.27	4839	30143	36200	861				
1806	6021802006			272.323	6.92		331.542	8.42	5804	36154	43419	1033				
1807	6021802007			317.598	8.07		376.818	9.57	6769	42164	50637	1205				
1808	6021802008			362.874	9.22		422.093	10.72	7734	48175	57856	1377				
1809	6021802009			408.150	10.37		467.369	11.87	8699	54186	65075	1549				
2101	6022102001	252.643	6.42	45.945	1.17	69.612	115.557	2.94	1332	8302	9970	237	29	180	217	5
2102	6022102002			91.220	2.32		160.832	4.09	2646	16483	19796	471				
2103	6022102003			136.496	3.47		206.108	5.24	3959	24665	29621	705				
2104	6022102004			181.772	4.62		251.383	6.39	5273	32846	39447	939				
2105	6022102005			227.047	5.77		296.659	7.54	6586	41028	49272	1173				
2106	6022102006			272.323	6.92		341.935	8.69	7900	49209	59098	1407				
2107	6022102007			317.598	8.07		387.210	9.84	9213	57391	68923	1641				
2108	6022102008			362.874	9.22		432.486	10.99	10527	65572	78749	1874				
2109	6022102009			408.150	10.37		477.761	12.14	11840	73754	88574	2108				
2401	6022402001	288.735	7.33	45.945	1.17	80.004	125.949	3.20	1740	10843	13023	310	37	236	283	6
2402	6022402002			91.220	2.32		171.224	4.35	3456	21529	25856	615				
2403	6022402003			136.496	3.47		216.500	5.50	5172	32215	38689	921				
2404	6022402004			181.772	4.62		261.776	6.65	6887	42901	51523	1226				
2405	6022402005			227.047	5.77		307.051	7.80	8603	53587	64356	1532				
2406	6022402006			272.323	6.92		352.327	8.95	10318	64273	77189	1837				
2407	6022402007			317.598	8.07		397.602	10.10	12034	74959	90023	2143				
2408	6022402008			362.874	9.22		442.878	11.25	13749	85645	102856	2448				
2409	6022402009			408.150	10.37		488.154	12.40	15465	96331	115689	2754				
2701	6022702001	324.826	8.25	45.945	1.17	90.396	136.341	3.46	2203	13724	16482	392	47	298	358	8
2702	6022702002			91.220	2.32		181.617	4.61	4374	27248	32724	779				
2703	6022702003			136.496	3.47		226.892	5.76	6545	40773	48966	1165				
2704	6022702004			181.772	4.62		272.168	6.91	8717	54297	65208	1552				
2705	6022702005			227.047	5.77		317.444	8.06	10888	67822	81451	1939				
2706	6022702006			272.323	6.92		362.719	9.21	13059	81346	97693	2326				
2707	6022702007			317.598	8.07		407.995	10.36	15230	94871	113935	2712				
2708	6022702008			362.874	9.22		453.270	11.51	17402	108395	130177	3099				
2709	6022702009			408.150	10.37		498.546	12.66	19573	121920	146419	3486				
3001	6023002001	360.918	9.17	45.945	1.17	96.126	142.071	3.61	2720	16943	20348	484	59	368	442	10
3002	6023002002			91.220	2.32		187.347	4.76	5400	33640	40400	961				
3003	6023002003			136.496	3.47		232.622	5.91	8081	50337	60452	1439				
3004	6023002004			181.772	4.62		277.898	7.06	10761	67034	80504	1916				
3005	6023002005			227.047	5.77		323.173	8.21	13442	83731	100556	2394				
3006	6023002006			272.323	6.92		368.449	9.36	16123	100428	120609	2871				
3007	6023002007			317.598	8.07		413.724	10.51	18803	117124	140661	3349				
3008	6023002008			362.874	9.22		459.000	11.66	21484	133821	160713	3826				
3009	6023002009			408.150	10.37		504.276	12.81	24164	150518	180765	4303				

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MODEL	PART #	ACTUAL DIAMETER		HEIGHT					VOLUME							
				WALL SHEETS		ROOF	TOTAL*		NOM				PER INCH FB			
		(in)	(m)	(in)	(m)	(in)	(in)	(m)	(ft^3)	(Imp Gal)	(USG)	(bbl)	(ft^3)	(Imp Gal)	(USG)	(bbl)
3301	6023302001	397.010	10.08	45.945	1.17	106.518	152.463	3.87	3291	20501	24621	586	71	446	535	12
3302	6023302002			91.220	2.32		197.739	5.02	6534	40705	48884	1163				
3303	6023302003			136.496	3.47		243.014	6.17	9778	60908	73147	1741				
3304	6023302004			181.772	4.62		288.290	7.32	13021	81111	97410	2319				
3305	6023302005			227.047	5.77		333.566	8.47	16265	101314	121673	2896				
3306	6023302006			272.323	6.92		378.841	9.62	19508	121517	145936	3474				
3307	6023302007			317.598	8.07		424.117	10.77	22752	141721	170199	4052				
3308	6023302008			362.874	9.22		469.392	11.92	25995	161924	194462	4630				
3309	6023302009			408.150	10.37		514.668	13.07	29239	182127	218726	5207				
3601	6023602001	433.102	11.00	45.945	1.17	116.911	162.856	4.14	3917	24398	29301	697	85	531	637	15
3602	6023602002			91.220	2.32		208.131	5.29	7777	48442	58176	1385				
3603	6023602003			136.496	3.47		253.407	6.44	11637	72485	87051	2072				
3604	6023602004			181.772	4.62		298.682	7.59	15497	96529	115926	2760				
3605	6023602005			227.047	5.77		343.958	8.74	19357	120572	144801	3447				
3606	6023602006			272.323	6.92		389.233	9.89	23217	144616	173676	4135				
3607	6023602007			317.598	8.07		434.509	11.04	27077	168659	202551	4822				
3608	6023602008			362.874	9.22		479.785	12.19	30937	192703	231427	5510				
3609	6023602009			408.150	10.37		525.060	13.34	34797	216746	260302	6197				
3901	6023902001	469.194	11.92	45.945	1.17	127.303	173.248	4.40	4597	28634	34388	818	100	623	748	17
3902	6023902002			91.220	2.32		218.523	5.55	9127	56852	68277	1625				
3903	6023902003			136.496	3.47		263.799	6.70	13657	85070	102165	2432				
3904	6023902004			181.772	4.62		309.075	7.85	18187	113287	136053	3239				
3905	6023902005			227.047	5.77		354.350	9.00	22717	141505	169941	4046				
3906	6023902006			272.323	6.92		399.626	10.15	27248	169723	203829	4853				
3907	6023902007			317.598	8.07		444.901	11.30	31778	197941	237717	5659				
3908	6023902008			362.874	9.22		490.177	12.45	36308	226158	271605	6466				
4201	6024202001	505.286	12.83	45.945	1.17	137.695	183.640	4.66	5331	33209	39883	949	116	722	868	20
4202	6024202002			91.220	2.32		228.916	5.81	10585	65935	79185	1885				
4203	6024202003			136.496	3.47		274.191	6.96	15839	98661	118487	2821				
4204	6024202004			181.772	4.62		319.467	8.11	21093	131387	157789	3756				
4205	6024202005			227.047	5.77		364.743	9.26	26347	164113	197091	4692				
4206	6024202006			272.323	6.92		410.018	10.41	31601	196838	236393	5628				
4207	6024202007			317.598	8.07		455.294	11.56	36855	229564	275695	6564				
4208	6024202008			362.874	9.22		500.569	12.71	42109	262290	314997	7499				
4801	6024802001	577.469	14.67	45.945	1.17	158.480	204.425	5.19	6963	43375	52092	1240	151	944	1133	26
4802	6024802002			91.220	2.32		249.700	6.34	13825	86119	103425	2462				
4803	6024802003			136.496	3.47		294.976	7.49	20688	128863	154758	3684				
4804	6024802004			181.772	4.62		340.252	8.64	27550	171607	206092	4906				
4805	6024802005			227.047	5.77		385.527	9.79	34412	214351	257425	6129				
4806	6024802006			272.323	6.92		430.803	10.94	41275	257095	308759	7351				
4807	6024802007			317.598	8.07		476.078	12.09	48137	299839	360092	8573				

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WARRANTY STATEMENT

1. Meridian Manufacturing Inc, hereafter referred to as Meridian, guarantees its products against any defects in materials or workmanship for a period of twelve (12) months from the date of purchase, provided that the said products are set up according to its instructions and recommendations and also that the said products are operated and used in proper conditions and according to its instructions and recommendations.

2. Meridian's responsibility and obligations under this warranty shall be limited to replacement of parts and shall not extend to parts, equipment or accessories that are component parts of Meridian's products but that are manufactured by other manufacturers. Those manufacturers' warranty will apply to such parts, equipment or accessories. Any parts set up by reason of the application of this warranty shall be amenable to the terms of this warranty except that the period of twelve (12) months applicable to such parts shall be peremptory and that upon termination of the said period, warranty shall by null and void, for any purpose whatsoever with respect to the said parts substituted to it before the termination of the said period of twelve (12) months.

3. This warranty shall not extend to loss and damage to content of the products, neither to property or loss of revenue. Moreover, it shall not extend to bodily injuries, including death, sustained by any person or animal.

4. The purchaser shall give notice to Meridian, without delay, of any damage or defects to its products that he may ascertain before they are set up, otherwise this warranty will not apply to such damage or defects.

5. Any modification or incorporation whatsoever made to products, except those authorized or recommended by Meridian, shall void this warranty; this warranty shall not apply to damages resulting from improper installation or erection of products by purchaser.

6. This warranty is the sole and only warranty and it is in lieu of any other warranty, express or implied, statutory or not.

7. Any claim under this warranty shall by notified in writing to Meridian's head office within thirty (30) days from the failure.

Specifications and descriptions are subject to change without notice.

Register your product at: www.meridianmfg.com
For warranty information send an email to: warranty@meridianmfg.com

WARRANTY REQUEST PROCEDURE

1. The product must be registered with Meridian Manufacturing Inc.

2. The purchaser must contact the dealer, from where the unit was purchased, immediately upon discovery of any defects.

3. A completed Warranty Request (Claim) Form must be submitted by the dealer to the Meridian's warranty representative for review and any subsequent course of action.
   - Warranty requests must be completed with ALL required information in order it to be considered for approval.
   - Send photographs of the entire piece of equipment, and of the specific area of concern.

4. Warranty repair work will only be performed by Meridian or an approved representative of Meridian. Warranty work completed prior to Meridian's approval will NOT be honoured. Failure to follow this procedure may affect any or all of this warranty.

5. All warranty requests will be adjudicated at the sole discretion of Meridian and in accordance with the terms and conditions of the warranty.

(800) 667-5904 | www.meridianmfg.com | enviroproducts@meridianmfg.com

Part No: 13000008349-REV3