



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 6 List View

General Information

Contact

Default Values

Discount

Document Information

Clarification Request

Procurement Folder: 2018305

Procurement Type: Central Master Agreement

Vendor ID: 000000102909 

Legal Name: ACUANTIA INC

Alias/DBA:

Total Bid: \$0.00

Response Date: 08/13/2026 

Response Time: 12:32

Responded By User ID: TankDepot 

First Name: Adara

Last Name: Lamascus

Email: adara@tank-depot.com

Phone: 6822554001

SO Doc Code: CRFQ

SO Dept: 0803

SO Doc ID: DOT2700000003

Published Date: 7/30/26

Close Date: 8/13/26

Close Time: 13:30

Status: Closed

Solicitation Description: Vertical Brine Storage Tanks and Pumps

Total of Header Attachments: 6

Total of All Attachments: 6



Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder: 2018305
Solicitation Description: Vertical Brine Storage Tanks and Pumps
Proc Type: Central Master Agreement

Solicitation Closes	Solicitation Response	Version
2026-08-13 13:30	SR 0803 ESR08132600000001023	1

VENDOR
000000102909
ACUANTIA INC

Solicitation Number: CRFQ 0803 DOT2700000003
Total Bid: 0
Response Date: 2026-08-13
Response Time: 12:32:18
Comments:

FOR INFORMATION CONTACT THE BUYER
John W Estep
304-558-2566
john.w.estep@wv.gov

Vendor
Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Polyethylene Vertical Brine Storage Tank Single Wall 6,100	0.00000	EA	9729.960000	0.00

Comm Code	Manufacturer	Specification	Model #
24111800			

Commodity Line Comments: 6,500 Gallon HDLPE Vertical Single Wall Tank in White, 1.9 S.G. with Fittings and Accessories - 120" D x 153" H

Extended Description:

SEE ATTACHED PRICING PAGE ATTACHMENT A, FOR ACTUAL COST

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Polyethylene Vertical Brine Storage Tank Single Wall 10,000	0.00000	EA	15221.840000	0.00

Comm Code	Manufacturer	Specification	Model #
24111800			

Commodity Line Comments: 10,500 Gallon HDLPE Vertical Single Wall Tank in White, 1.9 S.G. with Fittings and Accessories - 142" D x 169" H

Extended Description:

SEE ATTACHED PRICING PAGE ATTACHMENT A, FOR ACTUAL COST

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Polyethylene Vertical Brine Storage Tank DOUBLE WALL 6,000	0.00000	EA	18486.840000	0.00

Comm Code	Manufacturer	Specification	Model #
24111800			

Commodity Line Comments: 6,500 Gallon HDLPE Vertical Double Wall Tank in White, 1.9 S.G. with Fittings and Accessories - 120" D x 199" H

Extended Description:

SEE ATTACHED PRICING PAGE ATTACHMENT A, FOR ACTUAL COST

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Peristaltic Pump	0.00000	EA		

Comm Code	Manufacturer	Specification	Model #
40151500			

Commodity Line Comments: Product not offered

Extended Description:

SEE ATTACHED PRICING PAGE ATTACHMENT A, FOR ACTUAL COST

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. **MANDATORY TERMS:** The Solicitation may contain **mandatory** provisions identified by the use of the words "**must**," "**will**," and "**shall**." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. **PRE-BID MEETING:** The item identified below shall apply to this Solicitation.

☒ A pre-bid meeting will not be held prior to bid opening

☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the **mandatory** pre-bid meeting. Failure to attend the **mandatory** pre-bid meeting shall result in disqualification of the Vendor's bid. No one individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in but are charged with knowing all matters discussed at the pre-bid.

Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions **must be submitted on or before the date listed below and to the address listed below to be considered.** A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding.

Submitted emails should have the solicitation number in the subject line. Question

Submission Deadline: July 30, 2026 by 2:00pm

Submit Questions to: John Estep
2019 Washington Street, East Charleston, WV 25305
Fax: (304) 558-3970
Email: john.w.estep@wv.gov

5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. BID SUBMISSION: All bids must be submitted on or before the date and time of the bid opening listed in section 7 below. Vendors can submit bids electronically through wvOASIS, in paper form delivered to the Purchasing Division at the address listed below either in person or by courier, or in facsimile form by faxing to the Purchasing Division at the number listed below. Notwithstanding the foregoing, the Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. The Purchasing Division will not accept bids or modification of bids via email.

Bids submitted in paper, facsimile, or via wvOASIS must contain a signature. Failure to submit a bid in any form without a signature will result in rejection of your bid.

A bid submitted in paper or facsimile form should contain the information listed below on the face of the submission envelope or fax cover sheet. Otherwise, the bid may be rejected by the Purchasing Division.

VENDOR NAME: *Acuantia Inc*
BUYER: John Estep
SOLICITATION NO.: CRFQ DOT2700000003
BID OPENING DATE: August 13, 2026
BID OPENING TIME: 1:30 PM EST
FAX NUMBER: 304-558-3970

Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason.

Bid Delivery Address and Fax Number:

Department of Administration, Purchasing Division 2019 Washington Street East
Charleston, WV 25305-0130
Fax: 304-558-3970

7. BID OPENING: Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery or via delivery by mail).

Bid Opening Date and Time: August 13, 2026 at 1:30 PM EST

Bid Opening Location:
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. ADDENDUM ACKNOWLEDGEMENT: Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgement Form. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

Vendor Instructions: Vendor shall complete the Pricing Pages by providing a bid price for each Contract Item bid. Vendor may bid any or all Contract items. This is a multiple vendor award Contract. Qualified responsible vendors shall be awarded a Contract for the lowest bid price, per Contract item, which meet all mandatory requirements of this Contract. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Vendor Name: Acuantia Inc

#	Est. Qty.	Contract Item Discription	Description in Vendors Billing System	Unit of Measure	Bid Price (Each)	Extended Total
1	13	Polyethylene Vertical Brine Storage Tank, Single Wall 6,100 Gallons	6,500 Gallon HDLPE Vertical Single Wall Tank in White, 1.9 S.G. with Fittings and Accessories - 120" D x 153" H	EA	\$9,729.96	\$126,489.48
2	4	Polyethylene Vertical Brine Storage Tank, Single Wall 10,000 Gallons	10,500 Gallon HDLPE Vertical Single Wall Tank in White, 1.9 S.G. with Fittings and Accessories - 142" D x 169" H	EA	\$15,221.84	\$60,887.36
3	26	Polyethylene Vertical Brine Storage Tank, Double Wall 6,100 Gallons	6,500 Gallon HDLPE Vertical Double Wall Tank in White, 1.9 S.G. with Fittings and Accessories - 120" D x 199" H	EA	\$18,486.84	\$480,657.84
4	43	Peristaltic Pump	No Quote	EA	No quote	No quote

9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. **ALTERNATE MODEL OR BRAND:** Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand **shall** clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items **may** be grounds for rejection of a Vendor's bid.

☒ This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

11. **COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6.2, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

12. **REGISTRATION:** Prior to Contract award, the apparent successful Vendor **must** be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

13. **UNIT PRICE:** Unit prices **shall** prevail in cases of a discrepancy in the Vendor's bid.

14. **PREFERENCE:** Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and must include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at: www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

15A. RECIPROCAL PREFERENCE: The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. Any request for reciprocal preference must include with the bid any information necessary to evaluate and confirm the applicability of the preference. A request form to help facilitate the request can be found at: www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

15. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:

For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37 and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors.

16. WAIVER OF MINOR IRREGULARITIES: The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.7.

17. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

18. NON-RESPONSIBLE: The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1- 5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform or lacks the integrity and reliability to assure good-faith performance.”

19. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.6. and § 148-1-6.3.”

20. **WITH THE BID REQUIREMENTS:** In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.7. This authority does not apply to instances where state law mandates receipt with the bid.

21. **EMAIL NOTIFICATION OF AWARD:** The Purchasing Division will attempt to provide bidders with e-mail notification of contract award when a solicitation that the bidder participated in has been awarded. For notification purposes, bidders must provide the Purchasing Division with a valid email address in the bid response. Bidders may also monitor wvOASIS or the Purchasing Division's website to determine when a contract has been awarded.

22. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that **shall** form the basis of a contractual agreement. **Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid.** Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☒ **Term Contract**

Initial Contract Term: The Initial Contract Term will be for a period of One (1) year. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to Three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

☐ **Alternate Renewal Term** – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that:

☐ the contract will continue for _____ years;

☐ the contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's Office (Attorney General approval is as to form only).

☐ **One-Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Construction/Project Oversight:** This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and continues until the project for which the vendor is providing oversight is complete.

☐ **Other:** Contract Term specified in _____

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☒ **Open End Contract:** Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☐ **One-Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

☐ **Construction:** This Contract is for construction activity more fully defined in the specifications.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One-Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked in this section must be provided to the Purchasing Division by the Vendor as specified:

☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

☐

☐

☐

☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

☒ **Commercial General Liability Insurance** in at least an amount of: \$1,000,000.00 per occurrence.

☐ **Automobile Liability Insurance** in at least an amount of: _____ per occurrence.

☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: _____ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.

☐ **Commercial Crime and Third Party Fidelity Insurance** in an amount of: _____ per occurrence.

☐ **Cyber Liability Insurance** in an amount of: _____ per occurrence.

☐ **Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.

☐ **Pollution Insurance** in an amount of: _____ per occurrence.

☐ **Aircraft Liability** in an amount of: _____ per occurrence.

☐

☐

☐

☐

9. WORKERS' COMPENSATION INSURANCE: Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. VENUE: All legal actions for damages brought by Vendor against the State shall be brought in the West Virginia Claims Commission. Other causes of action must be brought in the West Virginia court authorized by statute to exercise jurisdiction over it.

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

☐ _____ for _____.

☒ Liquidated Damages Contained in the Specifications.

☐ Liquidated Damages Are Not Included in this Contract.

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.

20. TIME: Time is of the essence regarding all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in www.state.wv.us/admin/purchase/privacy.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR NON-CONFLICT: Neither Vendor nor its representatives are permitted to have any interest, nor shall they acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. NO DEBT CERTIFICATION: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

38. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

39. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☒ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☒ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open hearth, basic oxygen, electric furnace, Bessemer or other steel making process.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
 1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
 2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a “substantial labor surplus area”, as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the Vendor must submit to the Agency a disclosure of interested parties prior to beginning work under this Contract. Additionally, the Vendor must submit a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-work interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

44. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES: This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

46. ISRAEL BOYCOTT: Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Gerardo Mireles - Chemical Sales Manager

(Address) 222 W Las Colinas Blvd, Ste 550, Irving TX 75039

(Phone Number) / (Fax Number) 817-953-8558

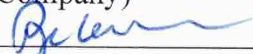
(email address) gmireles@tank-depot.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Acuantia Inc

(Company)



(Signature of Authorized Representative)

Rebecca Cap Merton CEO 8/12/26

(Printed Name and Title of Authorized Representative) (Date)

469-877 5009

(Phone Number) (Fax Number)

rcapmerton@acuantia.com

(Email Address)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

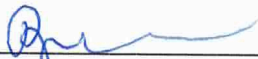
(Check the box next to each addendum received)

- | | |
|--|--|
| ☒ Addendum No. 1 | ☐ Addendum No. 6 |
| ☐ Addendum No. 2 | ☐ Addendum No. 7 |
| ☐ Addendum No. 3 | ☐ Addendum No. 8 |
| ☐ Addendum No. 4 | ☐ Addendum No. 9 |
| ☐ Addendum No. 5 | ☐ Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Aquantia Inc

Company



Authorized Signature

12/08/2026

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Department of Transportation to establish an open-end contract for Vertical Polyethylene Brine Storage Tanks and Peristaltic Pumps, for use for WVDOT projects throughout the state of West Virginia.
2. **DEFINITIONS:** The terms listed below shall have the following meanings assigned to them throughout and for the purpose of this Solicitation. Additional definitions can be found in Section 2 of the General Terms and Conditions.
 - 2.1 **“ADO” and “Agency Delivery Order”** - A written order entered by WVDOT personnel in the wvOASIS financial system against a master agreement, authorizing quantities of commodities and/or services to be delivered in accordance with all terms, conditions, and prices stipulated in the original contract.
 - 2.2 **“ASTM International” and “ASTM”** – the international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services. Reference: www.astm.org
 - 2.3 **“Contract Item(s)”** - The list of items available for Vendor to provide pricing as identified in Section 3.2 of this Solicitation and referenced throughout.
 - 2.4 **“Contractor” or “Vendor”** - Interchangeably used throughout this Solicitation and in any cited Sections of the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, adopted latest Standard Specs edition, as amended, including any Supplementals and refers to any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract, as context requires.
 - 2.5 **“FOB” or “Free on Board”** - Indicates that the price for goods includes delivery at the Vendor’s expense to a specified point, and that the Vendor retains liability for loss or damage until the goods are delivered.
 - 2.6 **“Liquidated Damages”** - Monetary compensation due from the Vendor in the event the Vendor’s performance falls short of contractual stipulation or breaches the contract. Delays in the delivery of goods and/or services or quality failures or corrections by the Vendor may result in the Agency assessing charges for such deficiencies per these contract Specifications, the Standard Specs Section 108.7, as amended, and calculated from the table posted in Section 6.2.2 of these Specifications.

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

- 2.7 “Pricing Pages,” “Attachment A,” and “ATT A”** - The schedule of prices attached hereto as Attachment A (ATT A) and used to evaluate Solicitation responses.
- 2.8 “Solicitation”** - The official notice of an opportunity to supply the State with goods or services.
- 2.9 “Standard Specs”** - Used throughout this solicitation means the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, most recent edition, as modified or amended by all subsequent Supplemental Specifications.
- 2.10 “WVDOT” or “Agency”** - Interchangeable terms for the West Virginia Department of Transportation.

3. GENERAL REQUIREMENTS:

- 3.1 Standard Specifications Roads and Bridges:** The following Standard Specs Sections shall apply, as applicable, to the administration of this contract: 101, 102, 103, 104, 105, 106, 107, 108, 109, and 110, as amended.

Free electronic copies of the Standard Specs and Supplementals are available at: <https://transportation.wv.gov/highways/TechnicalSupport/specifications/Pages/default.aspx>. Hard copies of these publications may be purchased from Technical Support Division, by completing the Specification Order Form provided within the website.

- 3.2 Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below. At the time of delivery, the Vendor shall schedule with the WVDOT for the availability of a WVDOT provided crane and operator for offloading the tanks from the Vendor’s delivery truck. Installation of the tank and pump shall be the responsibility of the WVDOT.

3.2.1 Vertical Polyethylene Brine Storage Tanks

- 3.2.1.1** Vertical Polyethylene Brine Storage Tanks must comply with ASTM D 1998-21 as amended, shall be constructed of high-density linear polyethylene and be one-piece seamless construction. Tanks must be rated for specific gravity of 1.9, with ultraviolet (UV) stabilizers to prevent degradation from sunlight

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

exposure. Tanks must be no larger than 13 feet height and 12 feet width. (Exhibits #1 and #2)

3.2.1.2 Tank inlet and outlet shall be through the top of the tank. Down pipes and fill pipes shall be supported at six foot (6') maximum intervals. Down pipes and fill pipes shall be polyvinyl chloride (PVC) or material compatible with the chemicals stored.

3.2.1.3 Vendor shall provide 20' long, two-inch (2") diameter, 100 pounds per square inch (PSI) flexible inlet and outlet hoses with two-inch (2") Diameter Poly quick connect attachment on tank with a two-inch (2") PVC shut off valve on the inlet and outlet hoses.

3.2.1.4 Each tank must be vented

3.2.1.5 Reverse Float Indication, the level indicator must be properly secured and shall consist of PVC float, indicator, polypropylene rope, perforated interior pipe, PVC roller guides, clear ultraviolet (UV) resistant PVC sight tube and necessary pipe supports. The level indicator shall act inversely to the tank contents and shall not allow entrance of tank contents into the sight tube at any time. Indicator shall be neon orange color for visual ease for onsite operators.

3.2.1.6 Tanks will be installed outside and must not require additional insulation, heat or electricity.

3.2.1.7 Tanks must have at least a 16" manway opening with lid, offset to the top edge of tank for easy access.

3.2.1.8 The color shall be either Natural White or Light Blue.

3.2.1.9 The tank shall have external measurements with gallon increments. Five-hundred-gallon (500) increments or less preferred.

3.2.1.10 Tanks must have a three (3) year express warranty that in the case of failure, due to either material or workmanship, the tank shall be repaired or replaced at the vendors expense. Warranty will begin

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

at time of delivery and acceptance of tank. Warranties shall be fulfilled by the awarded Vendor directly, not the manufacturer or other third party.

3.2.1.11 Must be suitable for sodium chloride brine solution, liquid calcium chloride, beet based deicing products, and 50% potassium acetate solution.

3.2.2 Double Wall Vertical Polyethylene Brine Tanks

3.2.2.1 Double Wall Vertical Polyethylene Brine Tanks must comply with ASTM D 1998-21 as amended, shall be constructed of high-density linear polyethylene and be one-piece seamless construction. Tanks rated for specific gravity of 1.9, with ultraviolet (UV) stabilizers to prevent degradation from sunlight exposure. Tanks must be no larger than 13 feet height and 12 feet width. (Exhibits #3 and #4).

3.2.2.2 All polyethylene, double walled tanks are to fill and empty through the top of the primary tank. Secondary tank will have a drain valve near the outside bottom. Down pipes and fill pipes shall be supported at six foot (6') maximum intervals. Down pipes and fill pipes shall be polyvinyl chloride (PVC) or material compatible with the chemical stored.

3.2.2.3 Vendor shall provide 20' long, two-inch (2") diameter, 100 pounds per square inch (PSI) flexible inlet and outlet hoses with two-inch (2") Diameter Poly quick connect attachment on tank with a two-inch (2") PVC shut off valve on the inlet and outlet hoses.

3.2.2.4 Each tank must be vented.

3.2.2.5 Reverse Float Indication, the level indicator must be properly secured and shall consist of PVC float, indicator, polypropylene rope, perforated interior pipe, PVC roller guides, clear ultraviolet (UV) resistant PVC sight tube and necessary pipe supports. The level indicator shall act inversely to the tank contents and shall not allow entrance of tank contents into the sight tube at any time.

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

Indicator shall be neon orange color for visual ease for onsite operators.

3.2.2.6 Tanks will be installed outside and must not require additional insulation, heat or electricity.

3.2.2.7 Tanks must have at least a 16" manway opening with lid, offset to the top edge of tank for easy access.

3.2.2.8 The color shall be either Natural White or Light Blue.

3.2.2.9 The tank shall have an external measurement with gallon increments. Five-hundred-gallon (500) increments or less preferred.

3.2.2.10 Tanks must have a three (3) year express warranty that in the case of failure, due to either material or workmanship, the tank shall be repaired or replaced at the vendor's expense. Warranty will begin at time of delivery and acceptance of tank. Warranties shall be fulfilled by the awarded Vendor directly, not the manufacturer or other third party.

3.2.2.11 Must be suitable for sodium chloride brine solution, liquid calcium chloride, beet juice/beet based deicing products, and 50% potassium acetate solution.

3.2.3 Peristaltic (Hose) Pumps

3.2.3.1 Peristaltic (hose) pump or roller pump shall act with fluid contained within a flexible tube fitting inside a circular pump casing. A rotor with rollers, shoes, wipers, or lobes attached to the external circumference of the rotor shall compress the flexible tube. As the rotor turns, the part of the tube under compression is pinched closed thus forcing the fluid to be pumped to move through the tube. The pump shall have at least two (2) rollers, or wipers.

3.2.3.2 The pump shall be capable of at least 30 gallons per minute (GPM) The pump shall have an ethylene propylene diene monomer (EPDM) hose used as the tubing for the pumping operation. This

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

EPDM hose shall be chemical resistant, to deal with brine, and suitable for temperatures from 0 degrees F to 158 degrees F.

3.1.3.3 The pump shall have polyvinylidene fluoride (PVDF) inserts.

3.1.3.4 The pump shall have hose-failure detectors.

3.1.3.5 The pump shall have an electric motor with 1 (one) phase. The motor needs to operate at 60hz and 100 to 550 volts. The motor shall have a minimum of five (5) horsepower. Pump must have an inverter.

3.1.3.6 Pumps must have a one (1) year express warranty that in the case of failure, due to either material or workmanship, the pump shall be replaced at the vendor's expense. Warranty will begin at time of delivery and acceptance. Warranties shall be fulfilled by the awarded Vendor directly, not the manufacturer or other third party.

4 CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. This is a multiple vendor award contract. Qualified responsible Vendors shall be awarded a contract for the lowest bid Contract Item per tank size and pump, which meet all the mandatory requirements of this Contract.

WVDOT reserves the right to request any one or combination of Contract Items for which bids are awarded at the lowest overall total as set forth in this section.

4.2 Pricing Pages, Attachment A ("ATT A"): Vendor shall complete the Pricing Pages by providing a bid price for each Contract Item listed. Vendor shall factor into their bid prices all equipment, materials, delivery, and labor required to provide Contract Items. Vendors may bid on this statewide contract. Vendor shall complete the Pricing Pages for each Contract Item bid in their entirety as failure to do so may result in the Vendor's bids being disqualified. All bids or pricing submitted shall be held and honored by the Vendor for 90 days after the bid opening date.

4.2.1 The Pricing Pages contain a list of Contract Items and estimated purchase volumes. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

4.2.2 Vendors should type or electronically enter the information into the Pricing Pages spreadsheet to prevent errors in the evaluation. In most cases, the Pricing Pages are available in wvOASIS within the solicitation attachments, however, Vendors may request an electronic copy of the Pricing Pages spreadsheet for bid purposes by sending an email request to the following address: john.w.estep@wv.gov.

4.2.3 Changing a column or row description, Contract Item description, unit of measure, or estimated quantities on the **Pricing Pages, Attachment A (ATT A)**, may result in the disqualification of Contract Item bid on the altered line. In circumstances when all Contract Items must be bid for bid evaluation and contract award, the disqualification of any Contract Item will result in the disqualification of the entire bid.

Submitting Pricing Pages other than those provided with this solicitation, as described in Section 4.3 may result in the disqualification of Vendor's bid in its entirety.

Vendor entries of bid prices or other notations made in wvOASIS commodity line descriptions will not be considered for bid evaluation or award.

4.2.4 Description in Vendors Billing System: Vendor should list the description of Contract Items as they will appear on the Vendors future invoices under this contract, if the vendor's description differs from the description listed on the Pricing Page (ATT A) with the solicitation. Providing this information with the bid facilitates future payment processing.

4.3 Contract Award Transition : Upon the award of this contract, WVDOH will announce the effective start date. Any order issued under the previous contract will remain in effect and shall not be cancelled without mutual written agreement between the issuing agency and the vendor.

4.4 Cooperative Contracting: The purchase prices on all Contract Items herein, available for the WVDOT, shall be adoptable for other public agencies upon their request. Agencies under the authority of the West Virginia Purchasing Division must receive prior approval by the Purchasing Director.

5 ORDERING AND PAYMENT:

5.4 Ordering: Vendor shall accept orders through regular mail, facsimile, email, or any other written forms of communication. Vendor shall maintain and keep current

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

its phone numbers, fax number, email address, locations, and ordering/billing/payment addresses with WVDOT and in wvOASIS. Vendor may, but is not required to, accept online orders through a secure internet ordering portal/website. If Vendor can accept online orders, it shall include in its response a brief description of how Agencies may utilize the online ordering system. Vendor shall ensure that its online ordering system is properly secured prior to processing Agency orders online.

5.5 Agency Delivery Order (“ADO”): District personnel must issue an ADO from wvOASIS for specific quantities of materials based on each project’s requirements and detailing the need and location information of work to be completed per Contract Items, as well as the start and end dates, which will become the agreed upon official start and end dates. The ADO must be created in wvOASIS and approved to “Final” prior to placing the order with the Vendor. The District is responsible for creating the ADO in wvOASIS and is required to submit the approved order, in writing, directly to the Vendor via mail, email or fax. **Verbal communication with the Vendor is not considered an official order.** In the event the Vendor denies an order or if there are changes to an ADO, the District must process a change order to the approved ADO issued from wvOASIS.

5.6 Invoicing: Invoices submitted to WVDOH For payment should contain the following information:

- Vendor’s name and payment remit-to address, as they appear in Vendor’s wvOASIS account.
- The corresponding order’s ADO number.
- The ordering Agency’s delivery site
- The Contract Item description, unit price, quantity, and extended total.
- The date(s) Contract Items were delivered.

5.7 Payment: Upon completion of the work indicated on the ADO, Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, as well as Electronic Funds Transfer as methods to process payment for goods and services. The Vendor shall accept the State of West Virginia’s Purchasing Card and Electronic Funds Transfer for payment of orders under this Contract. Electronic Funds Transfer for payment is available through the WV State Auditor’s Office. The Vendor may visit the WV State Auditor’s website (wvsao.gov) for all necessary forms and instructions. Payment method may be dictated at WVDOT’s discretion.

6 PROJECT ACCEPTANCE, DELIVERY AND RETURN:

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

- 6.1 Project Acceptance and Written Verification of Receipt:** Upon receipt of a WVDOT ADO, the Vendor shall advise the WVDOT in writing within five (5) calendar days of their acceptance or refusal of the ADO. As verification of receipt, Vendor must provide written acknowledgement of any ADOs and any Revisions/Modifications thereto sent by WVDOT. Failure to provide the WVDOT with written acknowledgement of any ADOs/Revisions within five (5) days of the Order being sent shall be considered refusal of the ADO. In the event of refusal, the WVDOT at its own discretion shall cancel the ADO and may seek to obtain the goods or services from the next low bid Vendor or proceed with an emergency purchase from the open market.
- 6.2 Delivery Time:** Vendor shall deliver standard orders within 45 working days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.
- 6.3 Late Delivery:** The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from another awarded vendor or proceed with an Emergency Purchase from the open market.
- 6.3.1** The Agency placing the ADO under this Contract must be notified in **business days prior to the scheduled delivery date noted on the writing by** the Vendor no later than five (5) Agency's order. Any failure to notify, acknowledge receipt of WVDOT's written ADOs/ Revisions resulting in delivery delay, or failure to start or complete the project per the WVDOT scheduled due dates may be determined by the WVDOT at its sole discretion as harmful to the Agency and as such, shall result in WVDOT's cancellation of the ADO and application of Liquidated Damages.
- 6.3.2** Liquidated Damages: If the Vendor's delivery completion or correction of deficient deliveries exceed the ADO completion due date or agreed upon timeframe, the Vendor shall agree that no extension of contract time will be granted unless liquidated damages are assessed. The WVDOT may calculate liquidated damages in the amount of \$100 per day, per ADO, beginning 10 business days after the WVDOT's latest specified ADO delivery by date.
- Liquidated damages shall be applied by Vendor as an itemized invoice credit for the corresponding ADO.

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

6.3.3 Force Majeure: It shall be further noted that the Vendor is not responsible for and shall not be penalized for delays in its delivery of goods and/or services when caused by factors or events outside Vendor's control, including but not limited to acts or omissions of the Agency or third parties, acts of civil or military authority, civil disturbance, war, terrorism, pandemics, explosions, fire, floods, tornadoes, or other natural disasters or acts of God.

6.4 Delivery Payment/Risk of Loss: Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost/discount of standard order delivery charges in its bid pricing and is not permitted to charge the Agency separately for such delivery

Deliveries made by the vendor shall be comprised only of Contract Items intended for delivery at that location and specified in the pricing pages, contract specifications or ADO. At no time shall property belonging to the West Virginia Department of Transportation be utilized as a lay-down or storage facility by the vendor, or items left with the intention of being distributed to an alternate location.

6.5 Project Acceptance Criteria: The WVDOT District Engineer or their designee shall have final acceptance of the work done by the Vendor, per project. Any work found by the WVDOT District Engineer or their designee not performed in accordance with these contract specifications or the Standard Specs, as amended, and/or found deficient and unacceptable by visual inspection will be rejected and, at the Vendor's/Contractor's expense, will be removed and replaced by the Vendor with work being continual until the Vendor's deficient work corrections are completed and deemed acceptable and approved by the WVDOT District Engineer or their designee. Under no circumstance shall the Vendor's deficiency corrections exceed 20 calendar days unless otherwise declared in writing by the WVDOT District Engineer or their designee and may be subject to Liquidated Damages as per Section 6.5. of these Contract Specifications.

6.6 Return of Unacceptable Items: The decision of the WVDOT District Engineer or their designee regarding materials, workmanship, quality etc., shall be final per the Standard Specs Section 105.1, as amended. If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either arrange for the return within five (5) days of being notified that items are unacceptable or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

purchase price, at the Agency's discretion.

- 6.7 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7 VENDOR DEFAULT:

- 7.1** The following shall be considered a vendor default under this Contract.

7.1.1 Failure to provide Contract Items in accordance with the requirements contained herein.

7.1.2 Failure to comply with other specifications and requirements contained herein.

7.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

7.1.4 Failure to remedy deficient performance upon request.

- 7.2** The following remedies shall be available to Agency upon default.

7.2.1 Immediate cancellation of the Contract.

7.2.2 Immediate cancellation of one or more release orders issued under this Contract.

7.2.3 Any other remedies available in law or equity.

REQUEST FOR QUOTATION
Vertical Brine Storage Tanks and Pumps

8 MISCELLANEOUS:

- 8.1 No Substitutions:** Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.
- 8.2 Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.
- 8.3 Vendor Name Change:** It is the Vendor's responsibility to notify the WVDOT of name changes or acquisition by another company during the term of this contract. The WVDOT must be notified in writing of the change/acquisition and intention for the contract's ownership within 10 days of the change. **Failure to do so may result in payment delays.**
- 8.4 Reports:** Vendor shall provide the Agency with quarterly reports, annual summaries, and/or monthly reports as requested by the Agency and/or the West Virginia Purchasing Division showing quantities, total dollar value of the Contract Items purchased, ordered, shipped & invoiced with dates in spreadsheet format as defined by the Agency. Failure to supply such reports may be grounds for cancellation of this Contract.
- 8.5 Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract Manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract Manager and his or her contact information below.

Contract Manager: Gerardo Mireles
Telephone Number: 817-953-8558
Fax Number: —
Email Address: gmireles@tank-depot.com

Vendor shall inform the Agency in writing of any changes to the information provided above within 10 calendar days of such changes. Failure to comply may be grounds for cancellation of this contract.

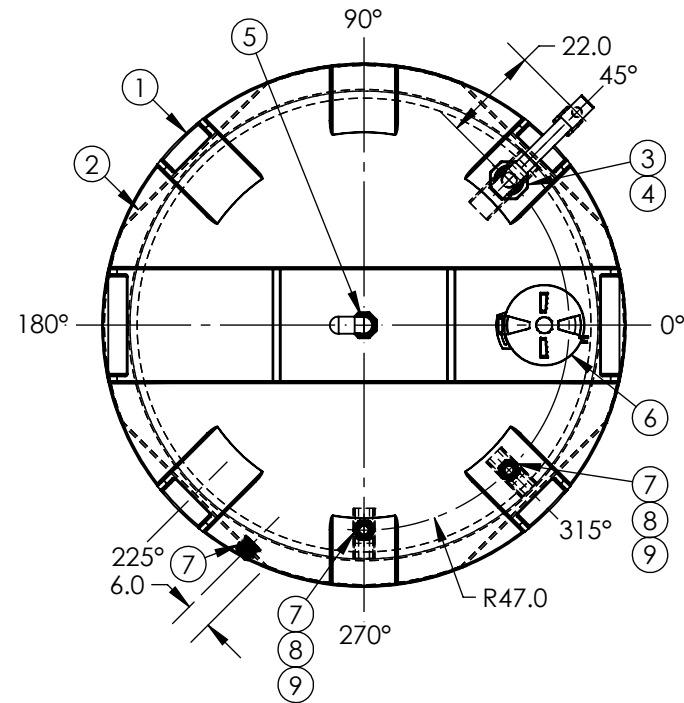
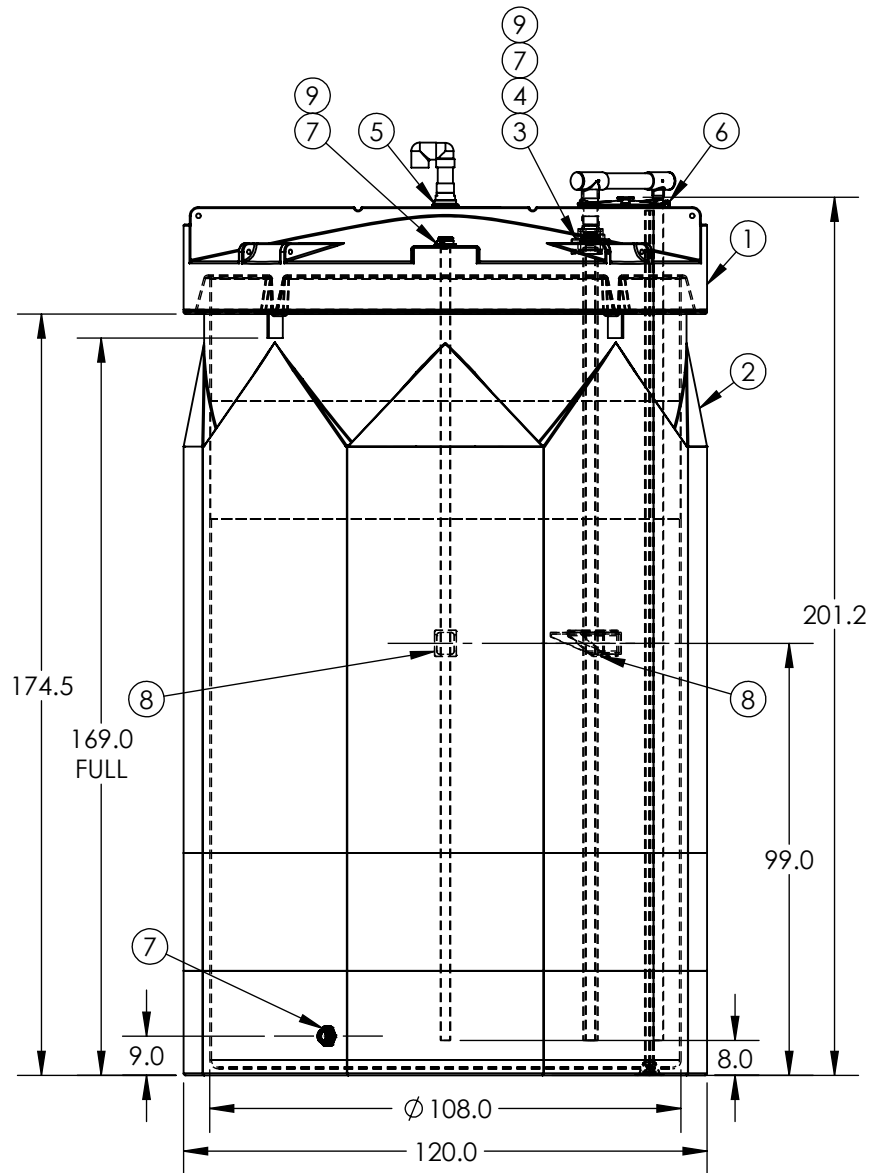
WV DOT

CUSTOMER APPROVAL☐ APPROVED FOR PRODUCTION AS DRAWN.☐ REVISE AS NOTED & RESUBMIT FOR APPROVAL.

SIGNATURE: _____

DATE: _____

DRAWING IS NOT VALID UNLESS SIGNED



*ITEM ⑦ NEAR 225° TO BE INSTALLED IN CONTAINMENT TANK ONLY.

9	2	34200050	PIPE PVC 2IN SCH 80
8	2	34701162	ASM SUPPORT PE 1IN-4IN PIPE WELDED
7	3	34200015	FTG PVC 2IN BH SXT EPDM
6	1	34700092	ASM MANWAY 18IN PP HINGED-VENTED
5	1	34700259	ASM U-VENT PVC 3IN W/BH & EPDM
4	1	34701342	ASM LEVEL GAUGE PP/PVC 6500 CCS
3	1	34200085	FITTING PVC 3IN SLF-A HYWD W/EPDM
2	1	5650000N97401	ASM TK 6500CC X 120 HD/NAT 1.5
1	1	5670000N97202	ASM TK6500CP X 108 HD/NAT 1.9 NO MW
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION

CUSTOMER:

CUSTOMER NO: **WV DOT**

DO NOT SCALE

STATUS:

Released

© TANK HOLDING, CORP, 2026

SII SNYDER
INDUSTRIES
 A BRAND OF
 TANK HOLDING CORP.

 TITLE: **TK 6500CCS X 108 NAT/NAT
1.9 WV DOT**

REVISION

C

SHEET

1 OF 1

PART NO.

5670002N97207

ENG. ID.

A031974

*ALL EXTERNAL PIPING MUST BE INDEPENDENTLY SUPPORTED.
 *ONLY BASE FITTINGS TO BE LEFT INSTALLED AT TIME OF SHIPMENT PER SII PROCEDURE.
 *TANKS ORDERED WITH FOAM INSULATION WILL HAVE AN INCREASED DIAMETER OF 4-6 INCHES.
 *Consult Snyder's Guidelines for Use and Installation prior to delivery.

Available on-line at <http://www.snyderindustriestanks.com/Technical>

ALL DIMENSIONS ARE IN INCHES, NOMINAL, & SUBJECT TO CHANGE WITHOUT NOTICE.
 ALL DIMENSIONS ON ROTATIONAL MOLDED PARTS ARE SUBJECT TO A $\pm$ 3% TOLERANCE.

ALL DIMENSIONS, DESIGNS, AND INFORMATION ON THIS PRINT MUST BE
 CONSIDERED PROPRIETARY TO TANK HOLDING, CORP. AND MAY NOT
 BE USED, COPIED, OR DISTRIBUTED WITHOUT WRITTEN PERMISSION OF AN
 OFFICER (OR HIS AGENT) OF THE FIRM.

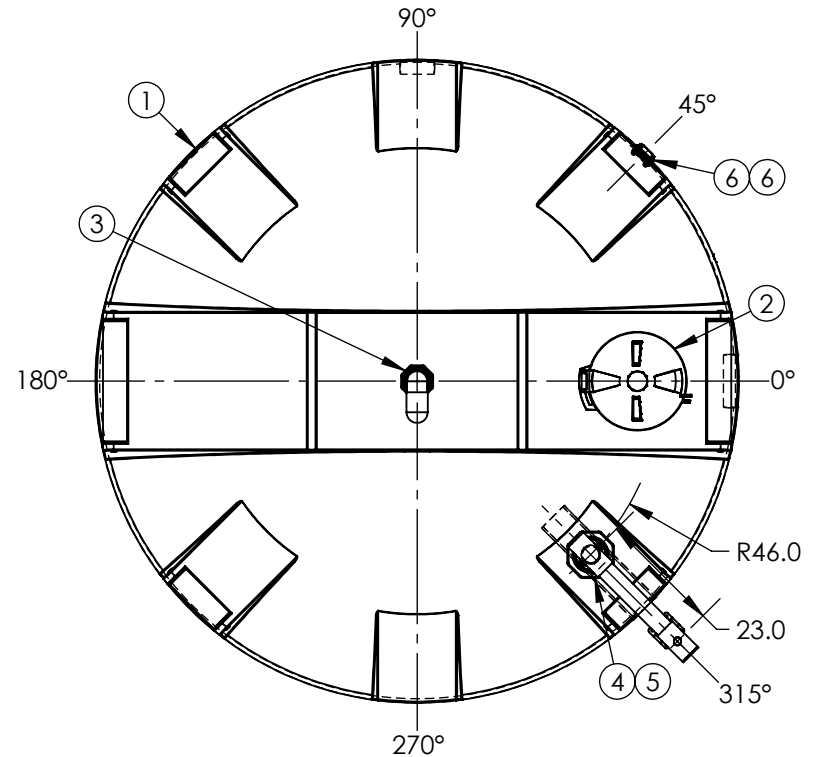
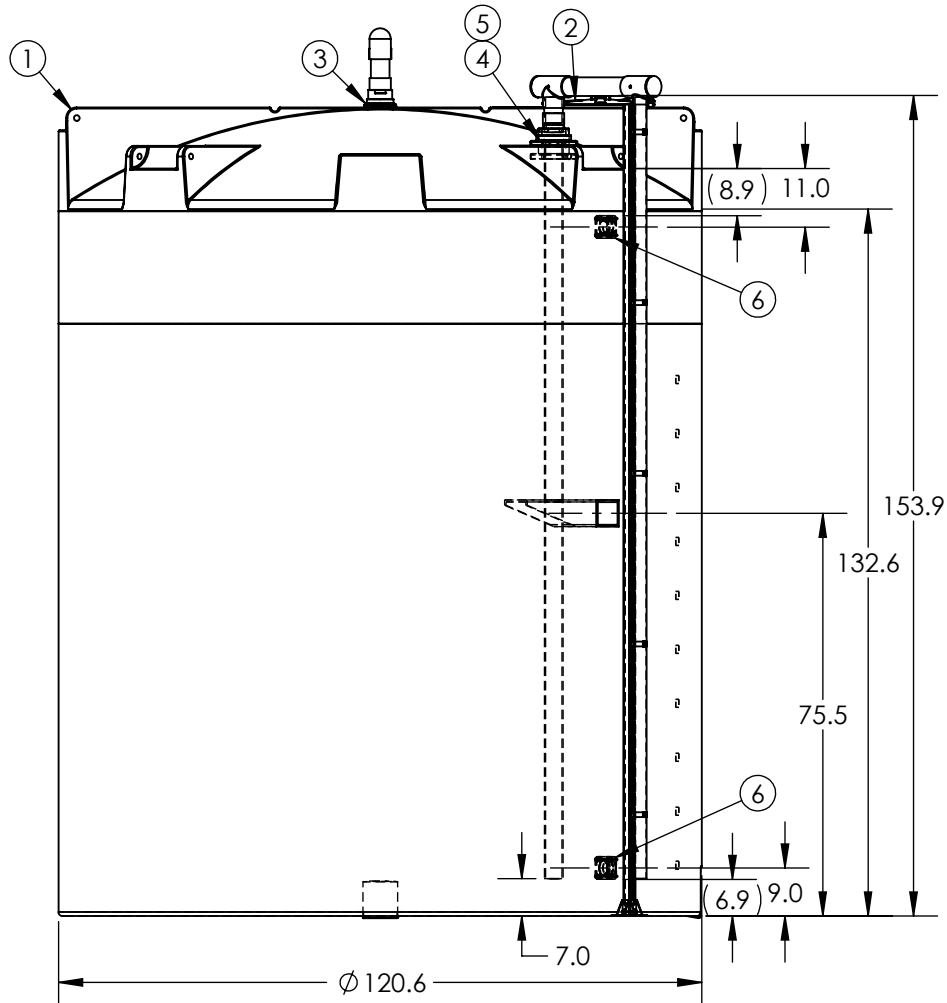
 (402) 467-5221
www.snyderetf.com

CUSTOMER APPROVAL☐ APPROVED FOR PRODUCTION AS DRAWN.☐ REVISE AS NOTED & RESUBMIT FOR APPROVAL.

SIGNATURE: _____

DATE: _____

DRAWING IS NOT VALID UNLESS SIGNED

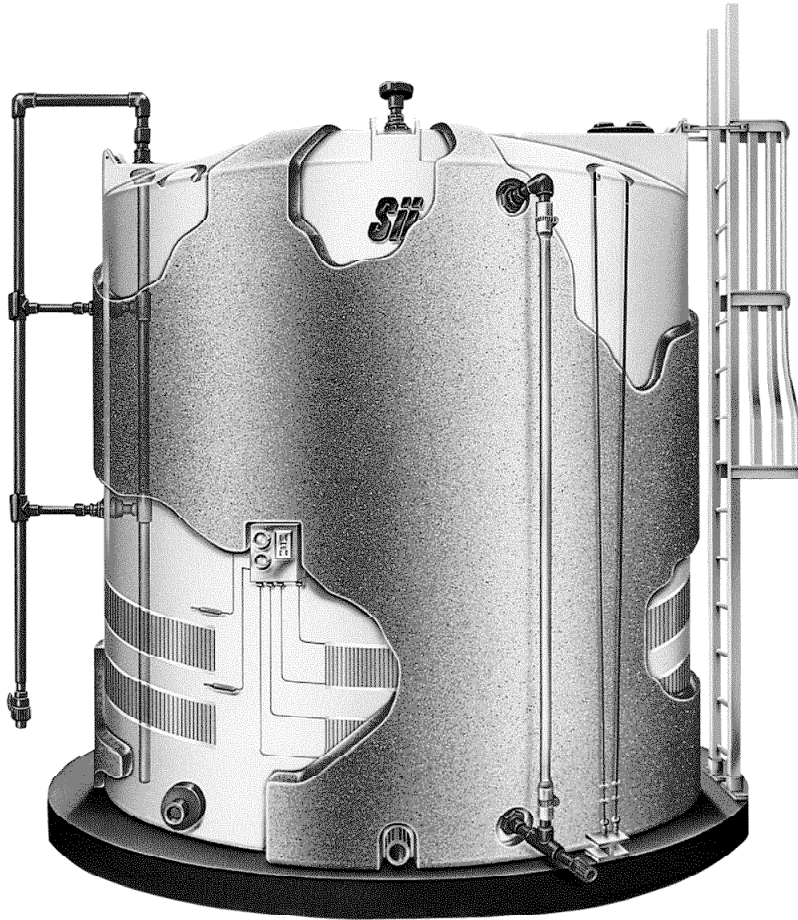


6	2	34701596	ASM 2IN BLTD FTG 316SS EPDM
5	1	34701316	ASM LEVEL GAUGE PP/PVC 3500 CCS
4	1	34200085	FITTING PVC 3IN SLF-A HYWD W/EPDM
3	1	34700259	ASM U-VENT PVC 3IN W/BH & EPDM
2	1	34700092	ASM MANWAY 18IN PP HINGED-VENTED
1	1	7140100N97202	ASM TK6500VCT X 120 HD/NAT 1.9 NOMW
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION

CUSTOMER:		CUSTOMER NO: WVDOT	
DO NOT SCALE		 A BRAND OF TANK HOLDING CORP.	TITLE: TK 6500VCT X 120 NAT 1.9 WVDOT1
STATUS: Released			
© TANK HOLDING, CORP, 2026		 A BRAND OF TANK HOLDING CORP.	SHEET 1 OF 1
ALL DIMENSIONS, DESIGNS, AND INFORMATION ON THIS PRINT MUST BE CONSIDERED PROPRIETARY TO TANK HOLDING, CORP. AND MAY NOT BE USED, COPIED, OR DISTRIBUTED WITHOUT WRITTEN PERMISSION OF AN OFFICER (OR HIS AGENT) OF THE FIRM.			
(402) 467-5221 www.snyderinf.com		PART NO. 7140100N97207	ENG. ID. A032572

*ALL EXTERNAL PIPING MUST BE INDEPENDENTLY SUPPORTED.
 *ONLY BASE FITTINGS TO BE LEFT INSTALLED AT TIME OF SHIPMENT PER SII PROCEDURE.
 *TANKS ORDERED WITH FOAM INSULATION WILL HAVE AN INCREASED DIAMETER OF 4-6 INCHES.
 *Consult Snyder's Guidelines for Use and Installation prior to delivery.
 Available on-line at <http://www.snyderindustriestanks.com/Technical>
 ALL DIMENSIONS ARE IN INCHES, NOMINAL, & SUBJECT TO CHANGE WITHOUT NOTICE.
 ALL DIMENSIONS ON ROTATIONAL MOLDED PARTS ARE SUBJECT TO A $\pm$ 3% TOLERANCE.

GUIDELINES FOR USE AND INSTALLATION



PROVIDING INDUSTRY WITH TANK SOLUTIONS

Protect your warranty – Read these instructions!



6940 O Street Suite #200 • Lincoln, Nebraska • 68510 • Phone: 402-467-5221
Fax: 402-465-1220 • www.snyderindustriestanks.com

TABLE OF CONTENTS

1. SAFETY CHECKLIST
2. WARRANTY INFORMATION
3. RECEIVING AND INSPECTING YOUR TANK
4. TANK LOADING, UNLOADING, AND POSITIONING
 - 4.1 HORIZONTAL TANKS
 - 4.2 SMALL VERTICAL TANKS (LESS THAN 2000 GALLON CAPACITY)
 - 4.3 LARGE VERTICAL TANKS (GREATER THAN OR EQUAL TO 2000 GALLONS)
 - 4.4 INSULATED TANKS
 - 4.5 CAPTOR CONTAINMENT TANKS (ADDITIONAL INSTRUCTIONS)
5. PRE-INSTALLATION NOTES
 - 5.1 TANK OPERATING CRITERIA
 - 5.2 FOUNDATIONS AND SUPPORTS
 - 5.3 TANK FITTINGS AND CONNECTIONS
 - 5.4 TESTING AND FINAL INSPECTION
 - 5.5 ACCESSORY PARTS
6. FITTINGS
 - 6.1 THREADED BULKHEAD FITTING
 - 6.2 SELF-ALIGNING THREADED BULKHEAD FITTING
 - 6.3 BOLTED FLANGE FITTING
 - 6.4 BOLTED STAINLESS STEEL FITTING
 - 6.5 BOLTED POLYPROPYLENE FITTINGS
 - 6.6 SNYDER UNITIZED MOLDED OUTLET - (SUMO™)
 - 6.7 SIPHON TUBE FITTINGS
 - 6.8 UNIFIED FITTING OUTLET - (UFO™)
 - 6.9 DUAL CONTAINMENT TANK (DCT)
7. TANK ATTACHMENTS
 - 7.1 U-VENTS
 - 7.2 MANWAYS / VENTS – AIR SURGE
 - 7.3 DOWN PIPES (TANK FITTING SUPPORTED) – (EXTERNAL AND/OR INTERNAL)
 - 7.4 DOWN PIPES (WELDED BOSS SUPPORTED) – (INTERNAL ONLY)
 - 7.5 DOWN PIPES (WELDED PE SUPPORTED) – (INTERNAL ONLY)
 - 7.6 DOWN PIPES (INDEPENDENTLY SUPPORTED) – (EXTERNAL ONLY)
 - 7.7 FLEXIBLE SIGHT LEVEL GAUGES
 - 7.8 REVERSE LEVEL SIGHT GAUGE (SIDEWALL SUPPORTED – WITH SADDLE CLAMPS)
 - 7.9 REVERSE LEVEL SIGHT GAUGE (GROUND SUPPORTED – WITH FRP STRUT SYSTEM)
 - 7.10 ULTRASONIC LEVEL INDICATOR
 - 7.11 LEAK DETECTOR UNIT (FOR USE WITH CAPTOR CONTAINMENT TANKS ONLY)
 - 7.12 FLANGE ADAPTERS
 - 7.13 FLEXMASTER EXPANSION JOINTS
8. TANK ACCESSORIES
 - 8.1 WIND/SEISMIC TANK RESTRAINT SYSTEM (FLAT BOTTOM TANKS)
 - 8.2 WIND/SEISMIC TANK RESTRAINT SYSTEM (CONE BOTTOM TANKS)
 - 8.3 WIND/SEISMIC TANK RESTRAINT SYSTEM (WITH NO MOLDED IN LUGS)
 - 8.4 STEEL LADDERS
 - 8.5 STEEL LADDER CAGES
 - 8.6 FRP LADDERS (UP TO 300" HEIGHT)
 - 8.7 FRP LADDER CAGES
 - 8.8 HORIZONTAL LEG TANK INSTALLATION
 - 8.9 HEATED TANKS
9. TANK MAINTENANCE
 - 9.1 TANK INSPECTION
10. SII PRODUCT POLICY STATEMENTS
 - 10.1 SII STANDARD LIMITED WARRANTY
 - 10.2 SII WARRANTY EXCEPTIONS
 - 10.3 RETURN MERCHANDISE/WARRANTY CLAIM PROCEDURE

1. SAFETY CHECKLIST

- 1.1 Confirm that the product to be stored is compatible with the tank and fittings.
- 1.2 Do not rigidly pipe tanks. Refer to section 5.3.2 for additional information.
- 1.3 Polyethylene tanks are designed and rated for ATMOSPHERIC PRESSURE ONLY. Proper venting alleviates pressure or vacuum from developing as the tank is filled or emptied. Venting should be sized to limit the tank to a maximum of 1/2 inch water column (0.018 PSI). Additional precautions may be required if the tank will be filled pneumatically (using air pressure). Review the chemical to see if it can be vented to the atmosphere or if it needs treatment prior to venting. Your application may need a sealed tank with a vent line to a powered scrubber system for proper chemical safety. **FAILURE TO PROVIDE PROPER VENTING WILL VOID YOUR WARRANTY.**
- 1.4 **WARNING:** It is the installer's responsibility to follow all appropriate NFPA, OSHA, and governmental safety precautions. The following information has been provided as guidelines for tank use and installation. It does not address safety issues which may be present at specific tank installation sites. Use appropriate safety practices when handling any tank and/or using heavy equipment.
- 1.5 Prevent excessive heat near or inside the tank. Standard polyethylene tanks are designed for a maximum continuous temperature of 100°F / 37.7°C. Consult factory for applications above 100°F / 37.7°C.
- 1.6 Consider tank entry as a confined space entry. Follow proper entry procedures.
- 1.7 Do not stand or work on top of a tank. The surface is flexible and slippery and a dangerous fall could occur. There is no weight or load rating for the tank dome. Remember – Safety First!
- 1.8 Read all warning labels on the tank prior to use and installation.
- 1.9 Record all warranty information as per section 2 while all information is available at time of tank receipt. Please refer to section 10 for warranty and policy statements.

2. WARRANTY INFORMATION

- 2.1 Record all required warranty information detailed below. Fax or mail this information to Snyder Industries at the number or address shown above. Retain a copy of this information for use in the advent of a warranty question.
- 2.1.1 Tank Part Number: _____
- 2.1.2 Tank Serial Number: _____
- 2.1.3 Tank Description/Size: _____
- 2.1.4 Date of Original Factory Invoice: _____
- 2.1.5 Snyder Customer Order Number: _____
- 2.1.6 Distributor Supplying Tank (name, address, and phone number): _____
- 2.1.7 Date of Water Pre-Test: _____

2.1.8 Water Pre-Test Observations: _____

2.1.9 Type of Chemical Stored: _____

2.1.10 Concentration of Chemical: _____

2.1.11 Tank Use Temperature: _____

3. RECEIVING AND INSPECTING YOUR TANK

3.1 Upon arrival at the destination, the purchaser and/or his agent shall be responsible for inspection for damage in transit. Prior to signing the bill of lading document If damage has occurred or parts are missing, the purchaser should document this on the bill of lading, file a claim with the carrier, and notify the manufacturer immediately to putting the tank into service.

3.2 Verify that the tank part number on the packing slip matches the tank bar code being delivered.

3.3 Do not drop a tank off a truck onto the ground. Please see section 4 for proper unloading instructions.

3.4 Please match tank components to bill of lading. Some tank components may be shipped inside the tank.
REMOVE ANY COMPONENTS SHIPPED INSIDE THE TANK BEFORE PUTTING THE TANK INTO A VERTICAL POSITION. Loose items that are installed inside the tank can be fitted up before the tank is put into a vertical position.

4. TANK LOADING, UNLOADING, AND POSITIONING

4.1 HORIZONTAL TANKS

4.1.1 Tanks shall be wrapped if ordered by the customer.

4.1.2 Tanks should be hand carried, moved with a handling cart, or moved with a forklift with protected or rounded fork extensions (to prevent sharp forks from damaging tanks and to provide adequate support for the tank as it is being moved).

4.1.3 Tanks should be loaded and unloaded from a horizontal position in the truck with a minimal amount of sliding. The tank shall be hand carried, moved with a handling cart, or moved with a forklift with protected or rounded fork extensions to minimize sliding.

4.1.4 Tanks should be loaded or unloaded from a dock of proper height or with a forklift with protected or rounded fork extensions. **NEVER drop a tank off of a truck onto the ground since this may damage the tank and void the warranty.**

4.2 SMALL VERTICAL and CONE BOTTOM TANKS (LESS THAN 2000 GALLON CAPACITY)

4.2.1 Tanks shall be wrapped if ordered by the customer.

4.2.2 Tanks should be hand carried, moved with a handling cart, or moved with a forklift with protected or rounded fork extensions (to prevent sharp forks from damaging tanks and to provide adequate support for the tank as it is being moved).

4.2.3 Tanks should be loaded and unloaded from a horizontal or vertical position in the truck with a minimal amount of sliding. The tank shall be hand carried, moved with a handling cart, or moved with a forklift with protected or rounded fork extensions to minimize sliding.

4.2.4 Tanks should be loaded or unloaded from a dock of proper height or with a forklift with protected or rounded fork extensions. **NEVER drop a tank off of a truck onto the ground since this may damage the tank and void the warranty.**

4.2.5 If a tank is to be stored for over one month before being put into service, it should be stored in an upright vertical position. Cone bottom tanks should be stored upright in their appropriate cone stand. Tanks stored outdoors must be secured to prevent movement or being overturned in high wind situations.

4.3 LARGE VERTICAL and CONE BOTTOM TANKS (GREATER THAN OR EQUAL TO 2000 GALLONS)

4.3.1 Tanks shall be wrapped if ordered by the customer.

4.3.2 Tanks should be moved, loaded, and unloaded in a horizontal position with a forklift with protected or rounded fork extensions, or with a crane with a spreader bar and 2 slings of appropriate size positioned on each tank as shown in Figure 4.3.2 NEVER drop a tank off of a truck onto the ground since this may damage the tank and void the tank warranty.

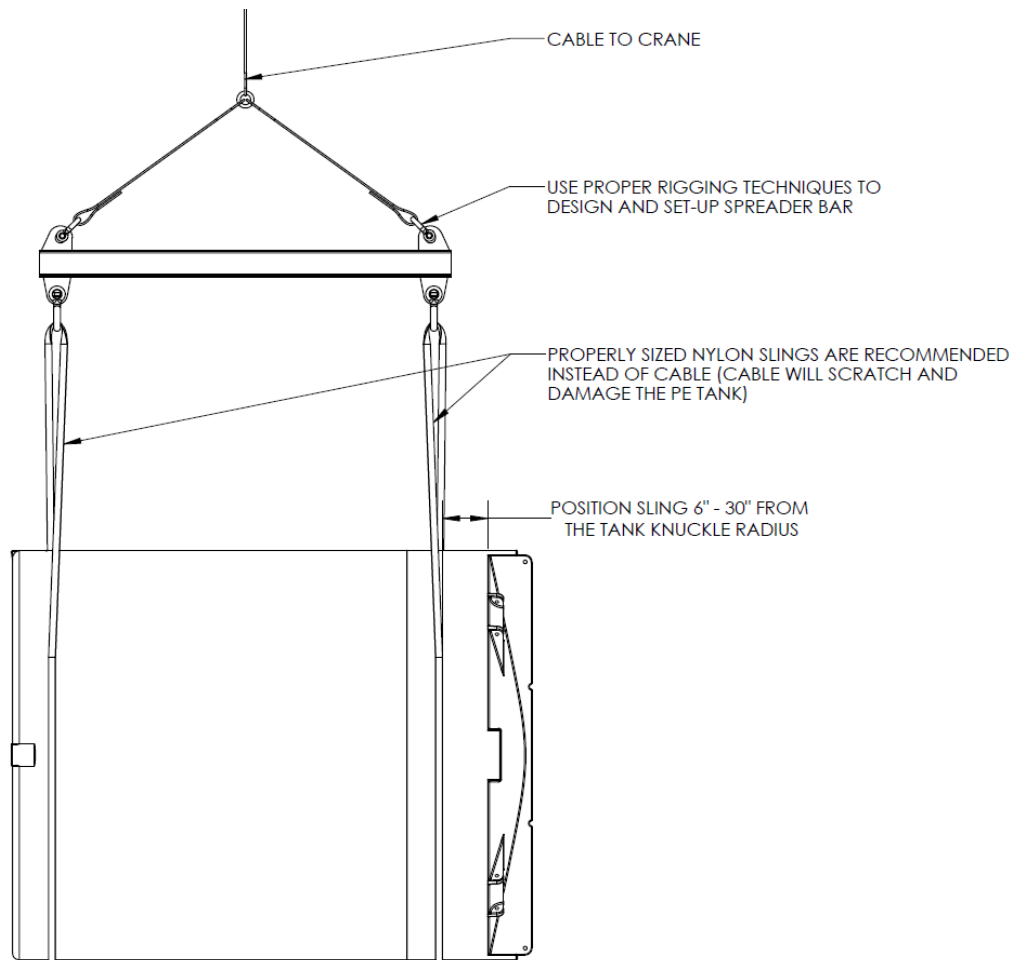


Figure 4.3.2

4.3.3 Tank lifting lugs are intended for moving the tank from a horizontal position to a vertical position from a firm surface. **Lifting lugs must not be used to load or unload tanks from trailers. This is a dangerous situation since the tank could roll off of the shifting trailer surface as the load is being moved.**

4.3.4 After the tank has been placed on a firm, level surface in a horizontal position, the lifting lugs may be used to erect the tank in a vertical position on an appropriate support pad. The tank should be lifted using a symmetrical arrangement of lugs to disperse the load evenly throughout the tank. The customer is also responsible for selecting lifting points so that when rigged no fittings or vents will be loaded, stressed or damaged during the lift. To properly attach to the lifting lugs a straight clevis should be used with a minimum open throat distance of 1-1/2" and 1" diameter pins. A minimum of 4 lugs should be attached with equal length cables on all large vertical tank sizes except 142" diameter tanks.

142" diameter tanks require 3 lugs to be attached. All tanks should be positioned with 2 lugs closest to the ground prior to lifting the tank to the vertical position. Refer to Figure 4.3.4 for additional information. If the tank does not have lifting lugs, it may be necessary to rig the tank with slings or use a pipe and chain through the tank manway to upright the tank. Please contact the factory for additional information as necessary.

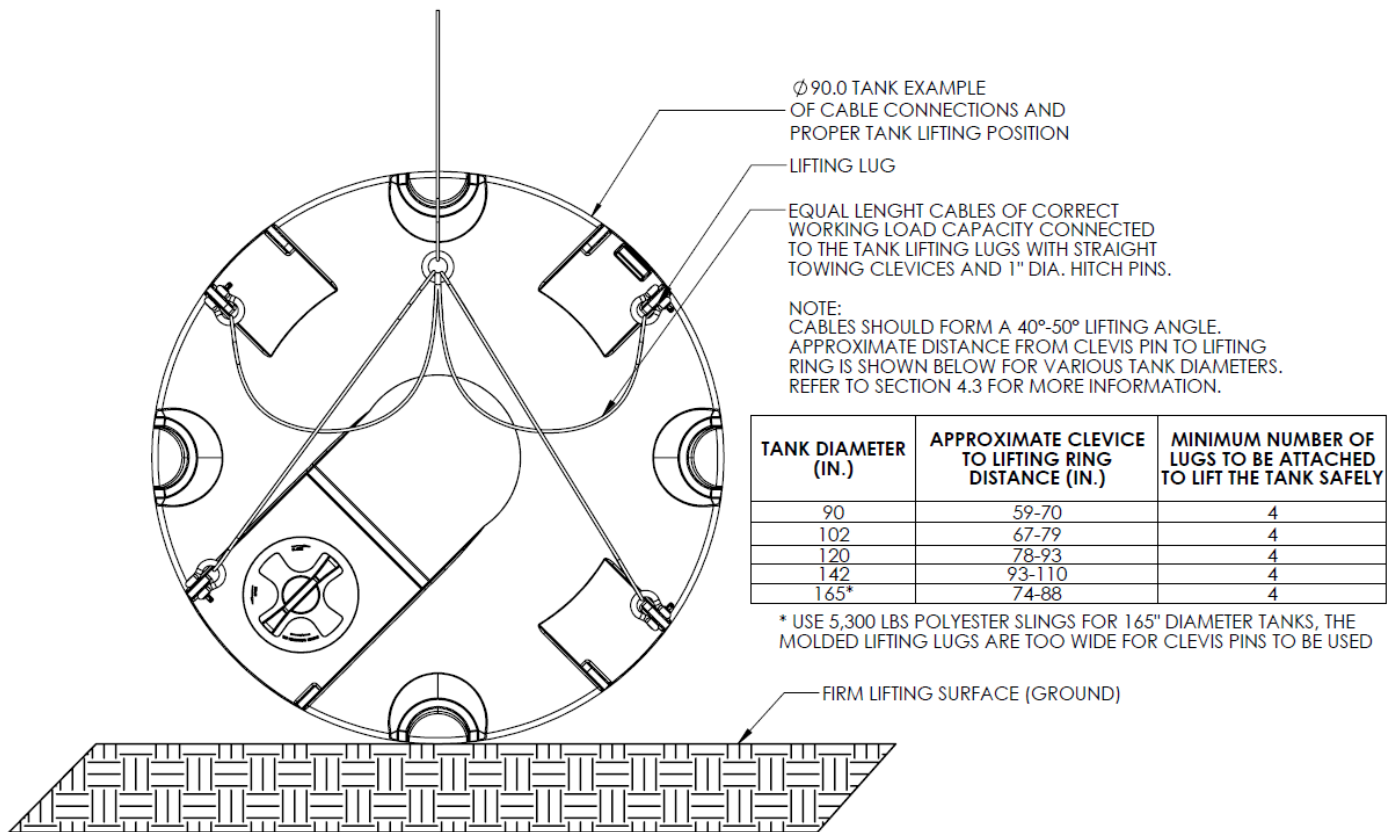


Figure 4.3.4

4.3.5 If a tank is to be stored for over one month before being put into service, it should be stored in an upright vertical position. Cone bottom tanks should be stored upright in their appropriate cone stand. Tanks stored outdoors must be secured to prevent movement or being overturned in high wind situations.

4.4 INSULATED TANKS (ADDITIONAL INSTRUCTIONS)

4.4.1 Insulated tanks must be moved with devices that have large padded contact surfaces to prevent damage to the foam insulation. **NEVER allow the tank to drop or roll on rough surfaces as this may damage the foam insulation.** When transporting foam insulated tanks, use 4" wide nylon straps and slings to move and secure the tanks. This will assist in decreasing the stress on the foam that can be caused by narrower straps.

4.5 CAPTOR CONTAINMENT TANKS (ADDITIONAL INSTRUCTIONS)

4.5.1 Captor containment tanks are shipped assembled (primary tank inside of containment tank) with a shipping cable assembly holding the two tanks together. Make sure the UFO bellows assembly didn't come off center due to the primary tank rotating or shifting during transit or offloading. Lift and position the tank as per previous instructions. Once the tank is in position, remove the shipping cables from the tank. Do not leave the shipping cables under the tank. Shipping cables must be removed prior to filling the tank, it is recommended to retain and store cables for use if the tank is to be moved in the future. Follow standard vertical tank restraining methods shown in section 8.1 to restrain the tank assembly for wind or seismic conditions.

4.5.2 If a captor tank is to be moved, it must have the shipping cables installed. Never move captor tanks without shipping cables installed tightly, or damage could result. Never try to move a flat bottom tank with any liquid in the tank.



Shipping cables on double wall Captors and DCTs need to be removed after the tank is set in place. If tank is to be moved again in the future, then the shipping cables would need to be re-attached prior to lifting.

5. PRE-INSTALLATION NOTES

5.1 TANK OPERATING CRITERIA

5.1.1 TEMPERATURE - All standard SII tanks are designed for a maximum continuous service temperature of 100° F. Service temperatures greater than 100° F reduce the strength of the tank. Applications with temperatures greater than 100° F require greater wall thickness to accommodate this reduction in strength. Please consult factory for applications with service temperatures greater than 100° F.

5.1.2 PRESSURE - All standard SII tanks are designed for use at atmospheric pressure. **Pressure or vacuum situations can cause excessive deformation or damage to the tanks and void warranty.** Please consult factory for applications which may develop pressure or vacuum situations.

5.1.3 CHEMICAL COMPATIBILITY - Suitability of the tank assembly (tank, fittings, gaskets, etc.) for storing a particular chemical must be confirmed by chemical data (this should have been done by the tank distributor or the end user prior to placing the tank order). However, changes to the tank (i.e. tank accessories, or the service of the tank) can occur. Please consult the factory with any questions.

5.1.4 LOCATION REQUIREMENTS - There may be location requirements which should be considered prior to placing the tank into service. Some items to consider are: secondary containment; locating the tank in a flood plain; locating the tank so it is easy to install and access for service; locating a tank in an area where seismic or wind forces may be experienced; heat from surrounding equipment; and the ability to remove and replace tank in the future. **It is the responsibility of the end user to ensure that all location requirements have been taken into consideration.** Check for all federal, state, and local regulations that may apply to the tank installation. A thorough evaluation of the proposed tank location prior to tank installation is recommended.

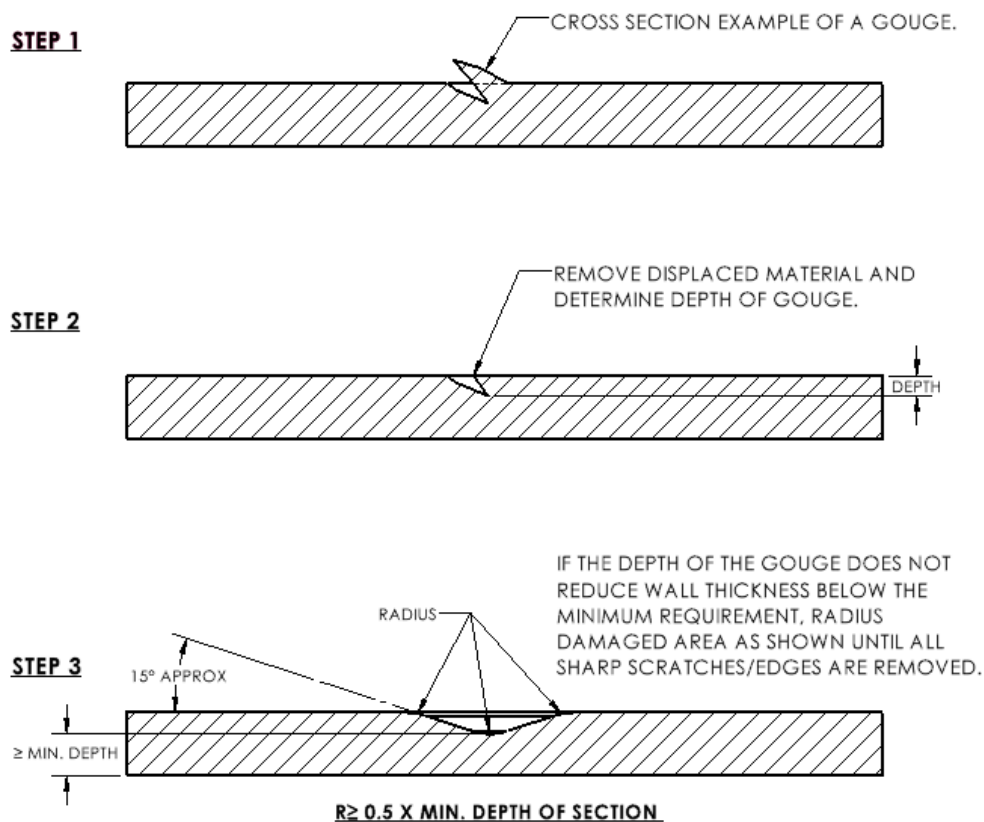
5.1.5 TANK ENTRY PRECAUTIONS - If entry into the tank is necessary, be sure to take all necessary precautions and follow all applicable regulations. Entry into a tank should be considered a "CONFINED SPACE ENTRY" with appropriate OSHA safety precautions required. There are many safety practices which should be considered depending on the specific conditions at the site. Please follow all local, state, and Federal rules and regulations.

5.1.6 GALLONAGE MARKINGS - Level markings on the tank or on gallon decals should be considered nominal measurements and are not intended for precise measuring or metering.

5.1.8 BASIC CLEANING - Basic cleaning of the tank requires the use of a pressure washer with a mild detergent and water temperature up to 130°F / 54°C

5.1.7 GOUGE REMOVAL – Should your tank get gouged during shipping or off-loading it may be repaired using the gouge removal procedure – refer to figure 5.1.

5.1.8 HYDRO TEST – The tank should be hydro tested (water test) for 24 hours before the introduction of chemical. If necessary, remove all test water to prevent any possible reaction with the chemical to be stored.



CALL (402)-467-5221 WITH ANY QUESTIONS REGARDING GOUGE REPAIR

Figure 5.1

5.2 FOUNDATIONS AND SUPPORTS

5.2.1 Vertical flat bottom tanks should be positioned on a concrete pad providing adequate support and a method to attach a tank restraint system (see Section 8 for restraint system pad placement criteria). The pad should be clean, smooth, and level so it fully supports the entire tank bottom with no deflection. The construction site engineer must design an appropriate concrete pad based on the specific application. **FAILURE TO PROVIDE PROPER FOUNDATION AND SUPPORTS WILL VOID WARRANTY.** A sand mound support can be placed under the tank bottom to promote tank drainage and extend tank life in certain applications. This is recommended for all tanks 10,000 gallons and larger. The sand should be a construction grade utility sand or finer. The tank and pad placement must be done to prevent any erosion of the sand from under the tank. Please refer to Figure 5.2. The sand mound must be very uniform without lumps or foreign objects. Per the chart in Figure 5.2, draw a circle on the tank pad and rake the sand uniformly with zero elevation at the circle perimeter and an elevation in the center per the chart in Figure 5.2. The chart recommendations are nominal dimensions. The best support is a sand mound that follows the normally convex shape of the tank bottom. If the tank bottom is not as convex as the dimensions shown for the sand mound in Figure 5.2, then follow the tank bottom. Adjust the sand mound shape/size so the tank has minimal contact with the sand when properly centered on the mound.

5.2.2 Vertical flat bottom tanks with SUMO fittings require a notch in the concrete support pad just in front of the SUMO fitting for piping and piping accessories. The SUMO fitting has a $\pm 5^\circ$ tolerance for fitting projection off horizontal. Since the SUMO fitting comes out from the tank very near ground level, concrete support pads which project past the SUMO fitting may interfere with the SUMO and/or its piping accessories. SII recommends that the support pad be notched to provide adequate clearance for piping and tank expansion/contraction movement. Please refer to Figure 5.2.2

5.2.3 Cone bottom or horizontal tanks require specifically designed support structures. Inadequate or improperly designed support structures may cause premature tank failure. **Therefore, any support structure that is not of SII manufacture must be approved by SII in writing or ALL WARRANTIES WILL BE VOIDED.** It is normal and by design that cone bottom tanks have a gap between the outer radius of the tank and the cone tank stand prior to first fill. The stand is designed to load the center of the stand first and then move into position/contact at the outer radius.

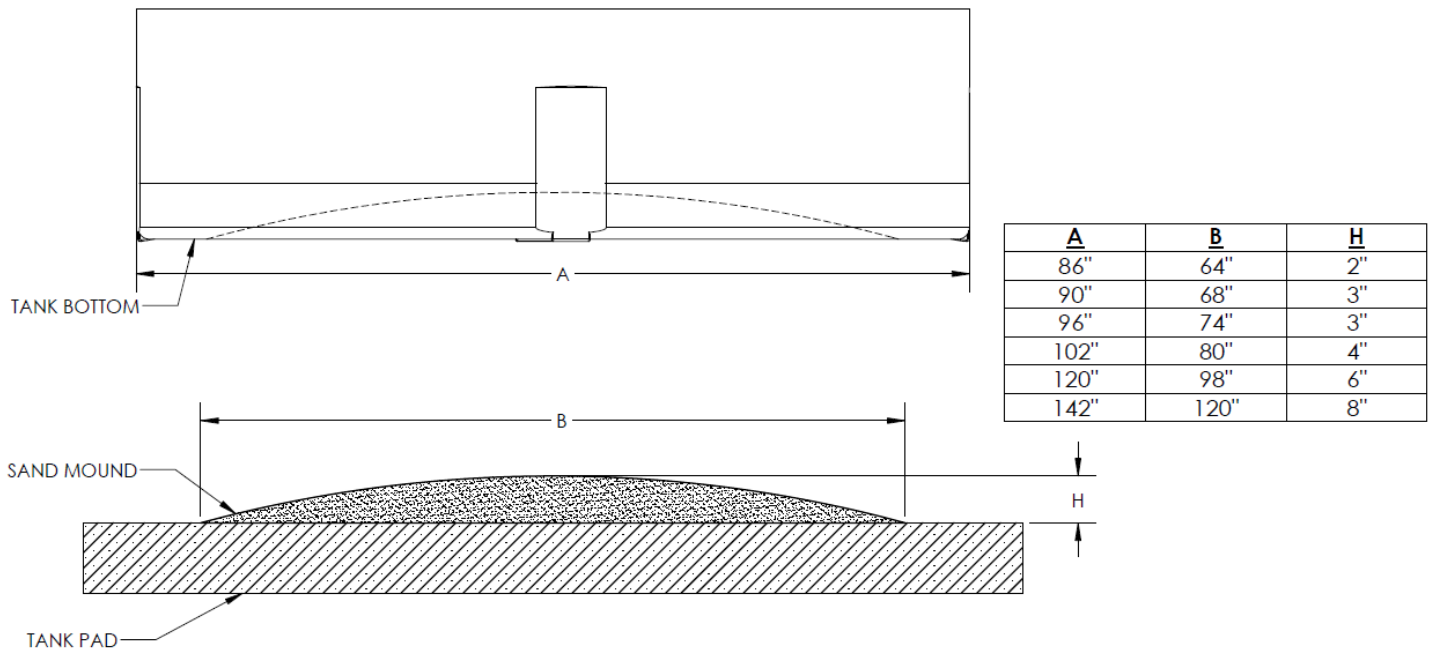
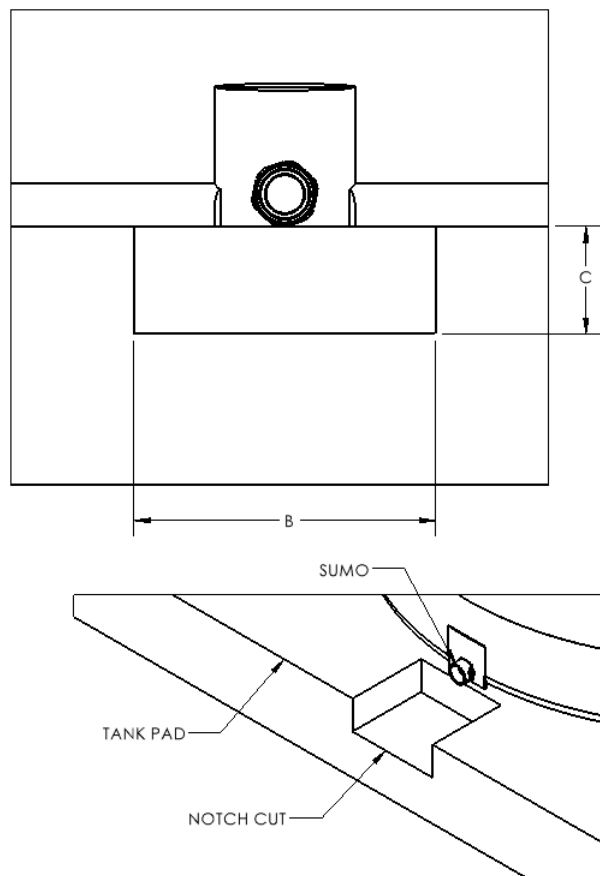


Figure 5.2



NOTES:

1. TANK MUST BE FULL SUPPORTED BY A SOLID PAD. (CONSULT A LOCAL CIVIL OR STRUCTURAL ENGINEER).
2. ALL TANK OUTLETS MUST BE CONNECTED TO PIPING WITH FLEXIBLE CONNECTIONS OR EXPANSION JOINTS CAPABLE OF 4% DIMENSIONAL MOVEMENT AS CLOSE TO THE TANK AS POSSIBLE (10" OR LESS). FLEXIBLE CONNECTION SHOULD BE DESIGNED FOR A $\pm 5^\circ$ ANGULAR MOVEMENT DUE TO TANK EXPANSION/CONTRACTION.
3. OTHER CONNECTION METHODS ARE AVAILABLE FOR SUMO OUTLETS.
4. DIMENSION "B" AND "C" ARE RECOMMENDED MINIMUM DIMENSIONS ONLY (NOT REQUIRED).

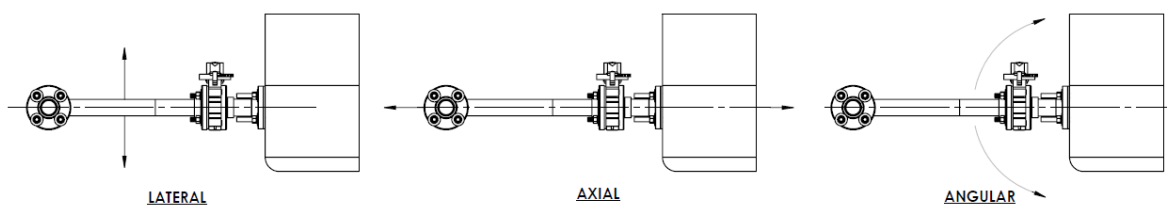
SIZE	DIM A	DIM B	DIM C
2"	1.13"	10"	5"
3"	1.13"	12"	5"
4"	1.40"	14"	5"

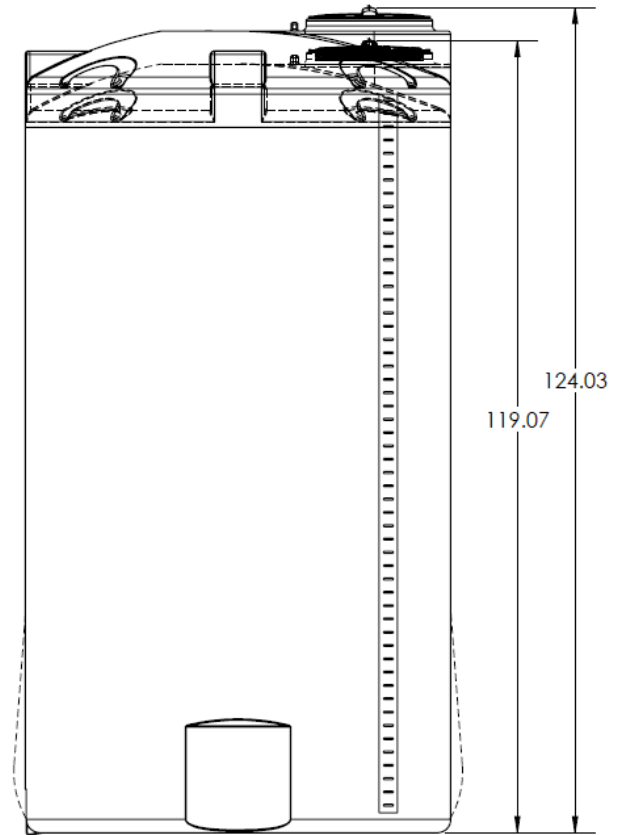
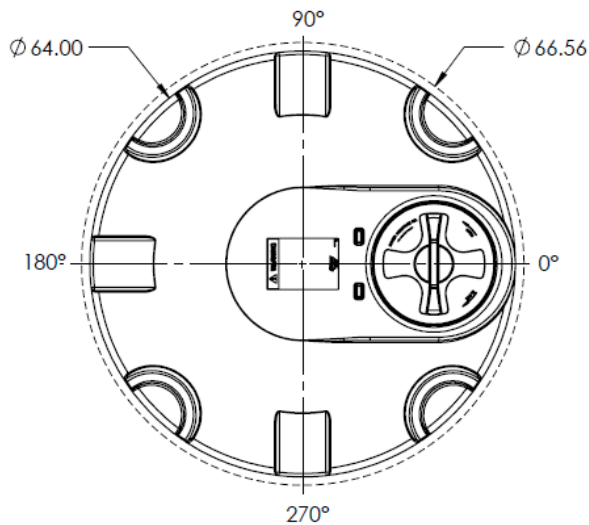
Figure 5.2.2

5.3 TANK FITTINGS AND CONNECTIONS

5.3.1 Most tank fittings are typically left installed in the tank. Some fittings are not installed due to damage potential or customer request. Customer job site fitting installation ensures proper gasket compression and minimizes fitting damage potential. This is because even the fittings installed at the factory may become damaged or loose during shipping and they need to be readjusted or retightened per section 6 (only necessary if the hydrotest is failed). Some distributors sell or install their own tank fittings or accessories. **These fittings or accessories are not warranted by SII.**

5.3.2 Tank connections must have adequate provisions for tank expansion/contraction due to temperature and load changes. See Figure 5.3.2 The overall height of the tank will shorten during filling. Therefore, on the top dome of the tank, the piping to top fitting connections must be allowed to move with the tank or flexible connections may be used. Rigid piping must not be directly plumbed to tank sidewall connections. Provisions must be made that allow 4%-dimensional movement on sidewall connections. SII requires using flexible hose, expansion joints or other provisions for all tank sidewall connections. Please see the hose connection examples in Figure 5.3.3 SII has developed the Flexmaster expansion joint for 2" and 3" bolted tank connections. Please see section 7.13 for more details. **The use of rigid piping or the failure to provide for the expansion of the tank will void all warranties.**





This example shows 4%-dimensional change after long term cold flow has occurred. The hidden lines shown the long term deflected case for the tank at 4% deflection. Tank deflection in the short term will exhibit a different shape than what is shown. Short term deflection is going to occur more at the mid-point of the tank and then settle over a long timer period to what is shown. This is the amount of deflection that should be designed into any piping connections to the tank. The flexible connection system would need to accommodate this type of movement. Typical movement under normal loading and temperature conditions is usually less than what is shown.

Figure 5.3.2

How to Calculate Examples.

<u>Dia</u>	<u>Radius</u>
48"	24" x .04 = 0.96"
64"	32" x .04 = 1.36"
90"	45" x .04 = 1.8"
102"	51" x .04 = 2.04"
120"	60" x .04 = 2.4"
142"	71" x .04 = 2.84"
165"	82.5" x .04 = 3.3"

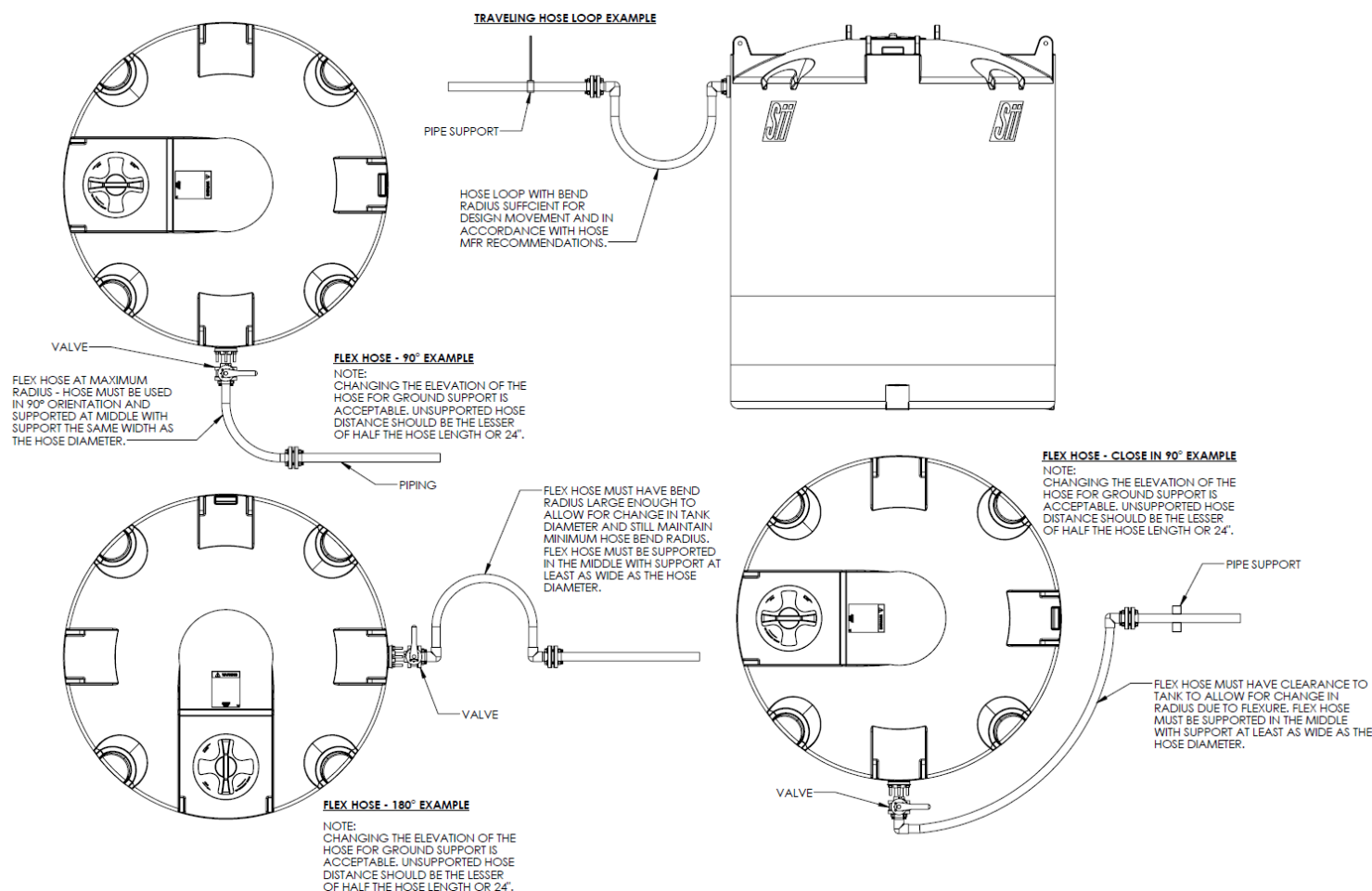


Figure 5.3.3

5.3.3 FITTING INSTALLATION GENERAL GUIDELINES - If fittings are to be customer drilled and installed, there are some general installation guidelines which may be helpful.

5.3.3.1 LOCATION - It is very important that fitting location be carefully considered prior to cutting any holes. **SII recommends (fitting size dependent) a 6" minimum centerline height for fittings on tanks less than 3000 gallons with the fitting gasket at least 1-1/2" above or below the end of any tank knuckle radius. SII recommends (fitting size dependent) a 9" minimum centerline height for fittings on tanks 3000 gallons or larger with the fitting gasket at least 3" above or below the end of any tank knuckle radius. SII recommends locating all fittings so gasket seal areas do not go through any tank flange lines or any molded-in tank feature (i.e. gallonage markers, logos, ribs, edges of tank flats, etc.).** SII does not recommend field cutting and installation of fittings on insulated tanks. Fittings must be located to avoid interference with tie-down devices and to allow for tightening of fittings nut(s). Mark all of the proposed fitting locations with a marker. Re-inspect all of the locations prior to cutting any holes.

5.3.3.2 TOOLS - It is very important to obtain the correct tools before attempting to install any tank fitting. Tools you will need for installing tank fittings properly include:

- *Marker for laying out holes
- *Tape measure, straight edge, plum-bob (to align fittings meant to be aligned), etc.
- *1/2" drill motor
- *Hole saw sized to the O.D. of the fitting body if bulkhead style (see section 6.1, and 6.2).
- *Hole saw sized to the I.D. of the fitting flange hole or the same size as the fitting's size if flange style (see section 6.3, and 6.4).
- *Drills for any bolt holes (size +1/16" larger than the size of the bolts)
- *Deburring tool (a drum sander and 150 - 220 grit sandpaper may also be used)
- *Wrenches (adjustable, sockets, strap wrench, etc.)

5.3.3.3 PROCEDURE

1. Disassemble the fitting and use it as a final location check as noted in 5.3.3.1.
2. With the center hole marked, cut the tank hole using the correct size hole saw (see 5.3.3.2).
3. If the fitting is a flange style (see section 6.3 and 6.4) then mark one of the bolt holes using the outer flange.

The bolt holes should be oriented so the bolt holes straddle the principal centerline of the tank. With the hole correctly located and marked, drill the bolt hole.

4. Temporarily install one bolt and position the flange over the main fitting hole.
5. Mark the bolt hole opposite the bolt hole already drilled and drill that bolt hole.
6. Temporarily install another bolt and drill the remaining bolt holes using the flange as a guide.
7. With all of the fitting's holes drilled, gently deburr the hole(s) with the deburring tool. Do not put any nicks or scratches into the tank. Sand any nicks or scratches out with sandpaper greater than 120 grit.
8. Clean away any debris from the sealing surface of the tank.
9. For tanks greater than 1/2" thick, measure the tank wall thickness. If the wall thickness is not consistent within $\pm 1/32$ " around all of the fitting hole(s), some sanding on the inside of the tank wall will be necessary. This must be done carefully and as little as necessary. The purpose of the sanding is to make the wall thickness even, not to create a flat on the tank wall. The final finish sanding should be done with greater than 120 grit sand paper (preferably 220 grit).
10. With all of the fitting's hole(s) prepared, install the fitting using the instructions from the appropriate section (6.1, 6.2, 6.3, or 6.4). The inside tank wall surface must be clean and smooth at time of fitting installation.

5.4 TESTING AND FINAL INSPECTION

5.4.1 After all fittings are installed and all connections to the tank have been made, fill the tank with water and hold for at least 5 hours to identify any leaks. **A record of the water pre-test must be submitted to SII to validate the tank warranty.**

5.5 ACCESSORY PARTS

5.5.1 Various parts must be packaged separately to prevent damage during transportation. These parts are usually bagged or boxed to prevent loss or damage. Some parts may be shipped inside of the tank.

6. FITTINGS

NOTE: The following installation instructions assume the tank has been predrilled and prepared for fitting installation by the factory. Most fittings are factory installed, but check fittings for damage and gasket compression. See section 5.3 for general tank fitting information if a fitting is to be installed without a factory prepared location. Prior to installing fittings, check the sealing surface for debris and/or scratches which could cause leakage.

6.1 THREADED BULKHEAD FITTING

6.1.1 Remove the nut (C) from the fitting body (A) and gasket (B). See Figure 6.1 for part identification.

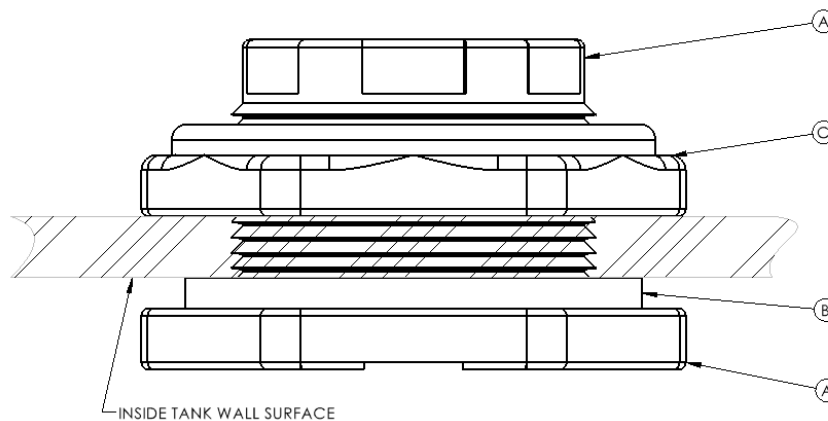


Figure 6.1

6.1.2 Working from inside the tank, slide the fitting body (A) through the hole in the tank. The gasket (B) should be between the fitting body flange and the inside tank wall. Install the nut (C) on the fitting threads protruding on the outside of the tank.

6.1.3 To obtain proper gasket compression for bulkhead fitting installation, tighten the fitting nut hand tight (check to see if it engages the tank wall). Tighten the nut an additional 3/4 turn for fittings less than 1 in., or 1/3 turn for fittings 1 in. or larger. Anti-seize is recommended to prevent thread seizing on bulkhead fittings. Inspect the gasket to make sure it is fully contacting the inner surface of the fitting body flange and the inside tank wall. Gasket compression should be between 25 - 50%. **Recheck fitting tightness periodically.**

6.2 SELF-ALIGNING THREADED BULKHEAD FITTING

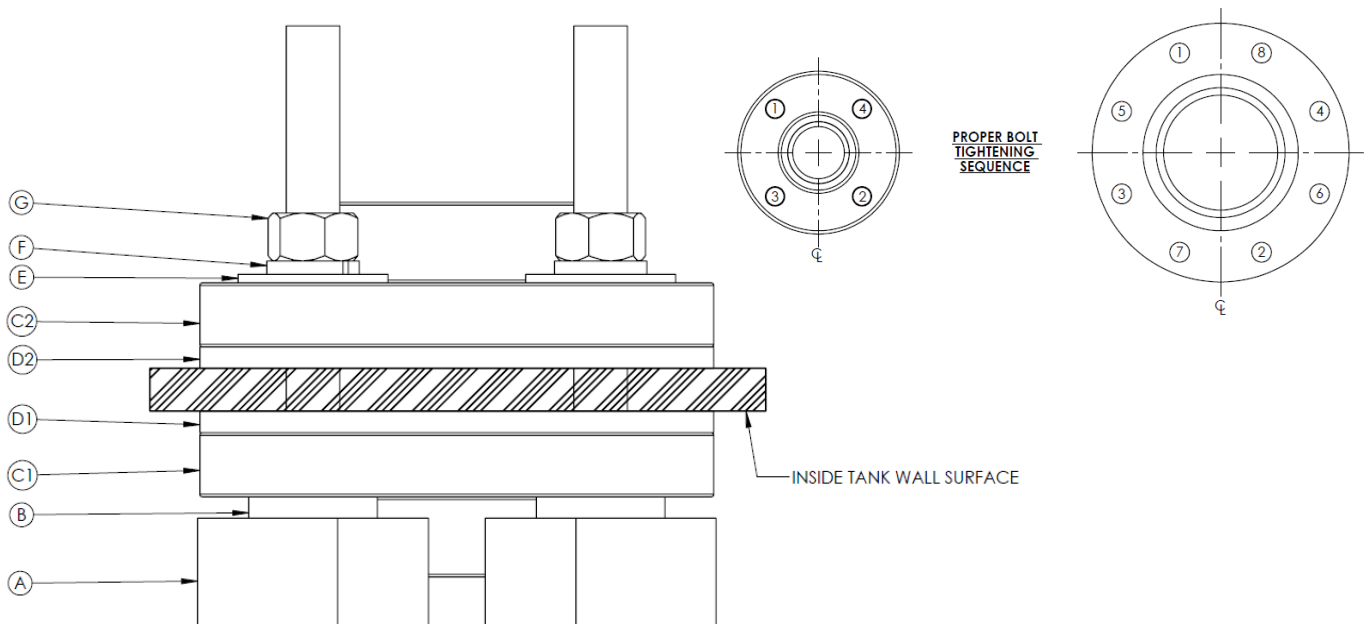
6.2.1 Follow the same procedures as detailed under threaded bulkhead fitting installation steps 6.1.1 - 6.1.3.

6.2.2 Piping should be installed into the fitting ball with an appropriate thread sealant (i.e. Teflon pipe sealant). Adjust the piping to the required angle (within the limits of the fitting). When the piping has been located as required, tighten the PVC ball retainer ring located on top of the PVC ball.

6.3 BOLTED PVC/CPVC FLANGE FITTING

6.3.1 The bolted flange fitting shall be constructed with 2 ea. 150 lb. flanges (C1 and C2), 2 ea. 150 lb. flange gaskets (D1 and D2), the correct number of full threaded bolts (A), bolt gaskets (B), flat washers (E), lock washers (F), and hex nuts (G) for the flange specified. NOTE: If the tank wall thickness is greater than or equal to 0.75", fittings with stainless steel bolts will require longer bolts for installation. Consult with the factory for the correct part number when ordering long-bolted flange fittings. Refer to Figure 6.3 for part identification.

6.3.2 Disassemble the fitting as shipped by removing the bolt's hex nuts, lock washers, flat washers, outer flange, and outer flange gasket. Locate the fitting hole on the inside of the tank and insert the bolts (still installed on the inner flange and gasket) through the drilled holes in the tank. Place the outer flange gasket over the bolts on the outside surface to the tank. Place the outer flange over the outer gasket and bolts. Install the flat washers, lock washers, and hex nuts on the bolts. Check to make sure the fitting assembly appears as shown in Figure 6.3.



PVC & CPVC BOLTED FITTING (ANSI 150# DESIGN**)				
SIZE	CENTER HOLE SAW SIZE	BOLT HOLE DRILL SIZE	EPDM GASKET TORQUE (FT-LBS)	VITON GASKET TORQUE (FT-LBS)
1"	1"	9/16"	15	20
1.5"	1.5"	9/16"	15	20
2"	2"	11/16"	25	30
3"	3"	11/16"	25	30
4"	4"	11/16"	25	30
6"	6"	13/16"	40	45
8"	8"	13/16"	40*	45*



Figure 6.3

6.3.3 To obtain proper gasket compression, tighten all the fitting nuts hand tight with a deep socket using the bolt tightening sequence shown until the gaskets engage the tank wall and the lock washers are compressed. Tighten each nut an additional 3 turns (2 turns if the inner flange and gasket are not utilized) using the same sequence (do not tighten more than 1 turn at a time). A light application of anti-seize is necessary to prevent thread seizing on S.S. bolts. Gasket compression should be between 25 - 50%. While gasket compression needs to be the controlling factor to obtain a proper seal, do not apply more torque than recommended in figure 6.3. **Recheck fitting tightness periodically.**

6.4 BOLTED STAINLESS STEEL FITTING

6.4.1 The bolted stainless steel fitting shall be constructed with 1 ea. inside flange with studs (A), 1 ea. fitting gaskets (B), 1 ea. outside flange (C), and the correct number of lock washers (D), and hex nuts (E) for the fitting specified. Refer to Figure 6.4 for part identification.

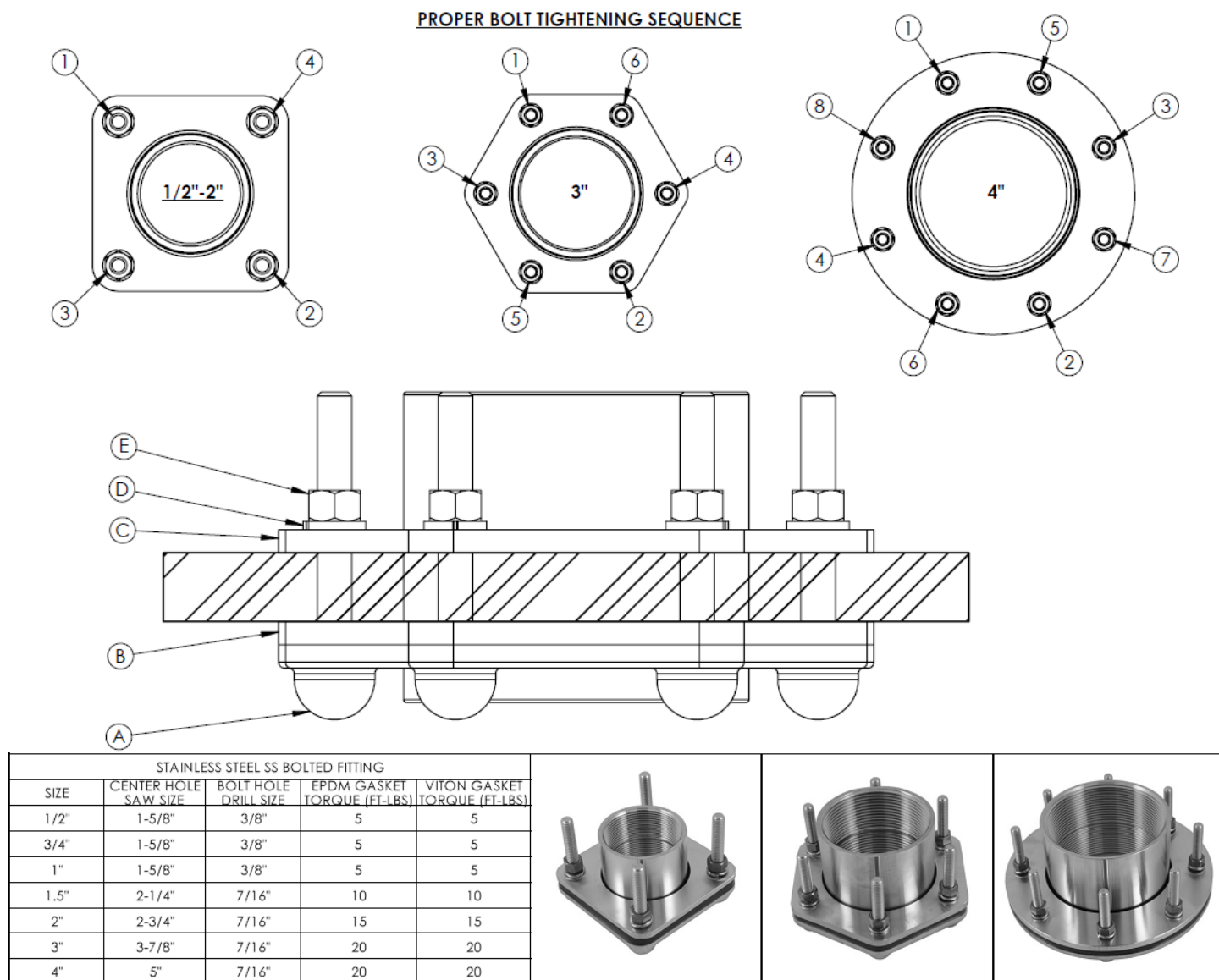


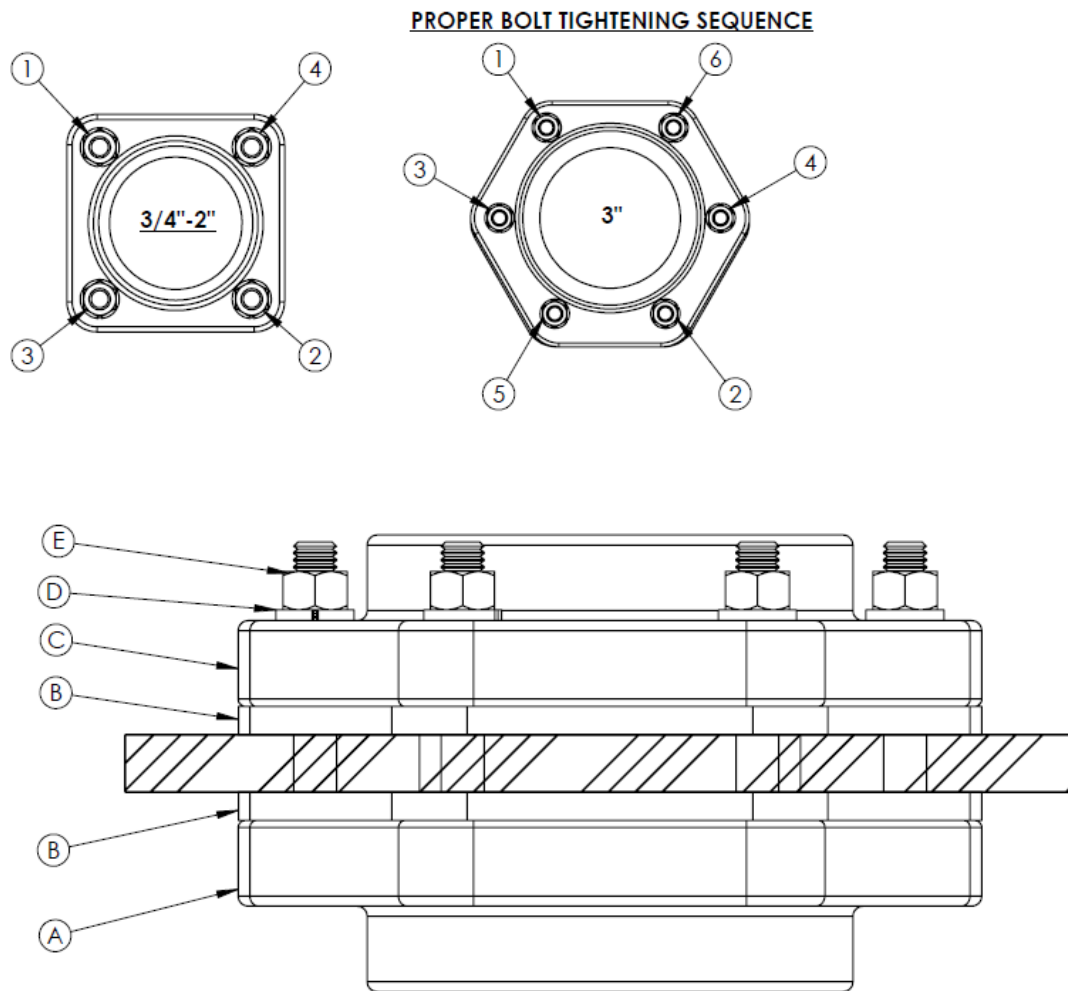
Figure 6.4

6.4.2 Disassemble the fitting as shipped by removing the hex nuts, lock washers, and outside flange. Locate the fitting hole on the inside of the tank and insert the fitting's studs through the drilled holes in the tank. The flange gasket (B) should be between the inside fitting flange and the inside tank wall. Place the outside flange over the studs on the outside surface of the tank. Install the lock washers and hex nuts on the studs. Check to make sure the fitting assembly appears as shown in Figure 6.4.

6.4.3 To obtain proper gasket compression, tighten all the fitting nuts hand tight with a deep socket using the bolt tightening sequence shown until the gasket engages the tank wall and the lock washers are compressed. Tighten each nut an additional 1 - 2 turns using the same sequence (do not tighten more than 1 turn at a time). While gasket compression needs to be the controlling factor to obtain a proper seal, do not apply more torque than recommended in figure 6.4. A light application of anti-seize is necessary to prevent thread seizing on S.S. bolts.

6.5 BOLTED POLYPROPYLENE FITTINGS

6.5.1 The bolted polypropylene fitting shall be constructed with 1 ea. inside flange with studs (A), 2 ea. fitting gaskets (B), 1 ea. outside flange (C), and the correct number of lock washers (D), and hex nuts (E) for the fitting specified. Refer to Figure 6.5 for part identification.



POLYPROPYLENE PP BOLTED FITTING				
SIZE	CENTER HOLE SAW SIZE	BOLT HOLE DRILL SIZE	EPDM GASKET TORQUE (FT-LBS)	VITON GASKET TORQUE (FT-LBS)
.75"	.75"	3/8"	10	10
1"	1"	3/8"	10	10
1.25"	1.25"	7/16"	10	10
1.5"	1.5"	7/16"	15	15
2"	2"	7/16"	15	15
3"	3"	7/16"	20	20



Figure 6.5

6.5.2 Disassemble the fitting as shipped by removing the hex nuts, lock washers, and outside flange. Locate the fitting hole on the inside of the tank and insert the fitting's studs through the drilled holes in the tank. The flange gasket (B) should be between the inside fitting flange and the inside tank wall. Place the second gasket over the studs on the outside surface of the tank then place the outside flange over the studs on the outside surface of the tank. Install the lock washers and hex nuts on the studs. Check to make sure the fitting assembly appears as shown in Figure 6.5.

6.5.3 To obtain proper gasket compression, tighten all the fitting nuts hand tight with a deep socket using the bolt tightening sequence shown until the gasket engages the tank wall and the lock washers are compressed. Tighten each nut an additional 1 - 2 turns using the same sequence (do not tighten more than 1 turn at a time). While gasket compression needs to be the controlling factor to obtain a proper seal, do not apply more torque than recommended in figure 6.5. A light application of anti-seize is necessary to prevent thread seizing on S.S. bolts.

6.6 SNYDER UNITIZED MOLDED OUTLET - (SUMO™) (PATENT NO. 5,374,026)

6.6.1 The SUMO fitting shall be constructed with 1 ea. smaller o-ring (A), 1 ea. larger o-ring (B), and 1 ea. SUMO adapter (C). Refer to Figure 6.6 for part identification. **NOTE - The tank is shipped with a shipping stabilizer installed in the SUMO outlet. NEVER move the container without the shipping stabilizer installed.**

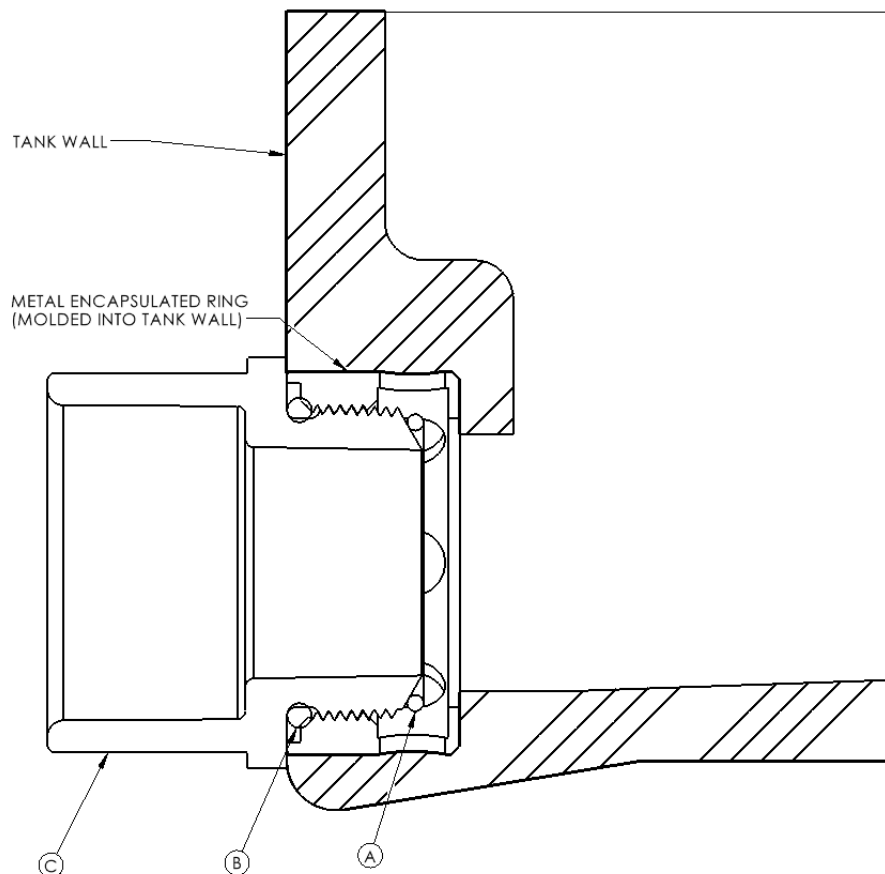


Figure 6.6

6.6.2 Once the tank has been properly placed on its foundation, remove the shipping stabilizer and clean away any dirt or debris from the SUMO outlet threads and o-ring seats. Use only a soft moist cloth. **NEVER USE A TOOL THAT COULD SCRATCH THE O-RING SEATS.**

6.6.3 Install the smaller o-ring inside the SUMO molded-in fitting. Make sure it is placed in the o-ring seat area evenly. Carefully stretch the larger o-ring enough to install it on the SUMO adapter. **Only a SII SUMO adapter may be used. Use of a non-approved adapter may damage your tank outlet and will void the tank warranty.** The o-ring may be lubricated with a suitable lubricant such as water. Do not use silicone or Teflon sealants. Screw the adapter in until the step on the adapter is flush with the tank wall. Do not over-torque the adapter (25 ft. - lbs. of torque maximum). Figure 6.5 shows a sectional view of an assembled SUMO fitting.

6.6.4 Once the SUMO adapter is installed, other components may be attached to the adapter. A union or flange adapter with a flexible expansion joint should be installed as close to the tank as possible to allow for future disassembly. The SUMO fitting must have adequate clearance for any piping accessories and allow for a $\pm 5^\circ$ outlet angle change. Consult factory for pad and/or accessory clearance questions. A notch in the tank support pad may be necessary (see Figure 5.2.2).

6.7 SIPHON TUBE FITTINGS

6.7.1 Siphon tubes may be added to the fittings specified in sections 6.1, 6.3, 6.4, 6.5. Siphon tubes shall be installed with the tank in a vertical position after fitting installation.

6.7.2 PVC and CPVC siphon tubes need to be solvent welded with the proper solvent cement into the socket of a previously installed fitting. Threaded siphon tubes need to be threaded in place with Teflon pipe sealant applied to the threads prior to the fitting being installed.

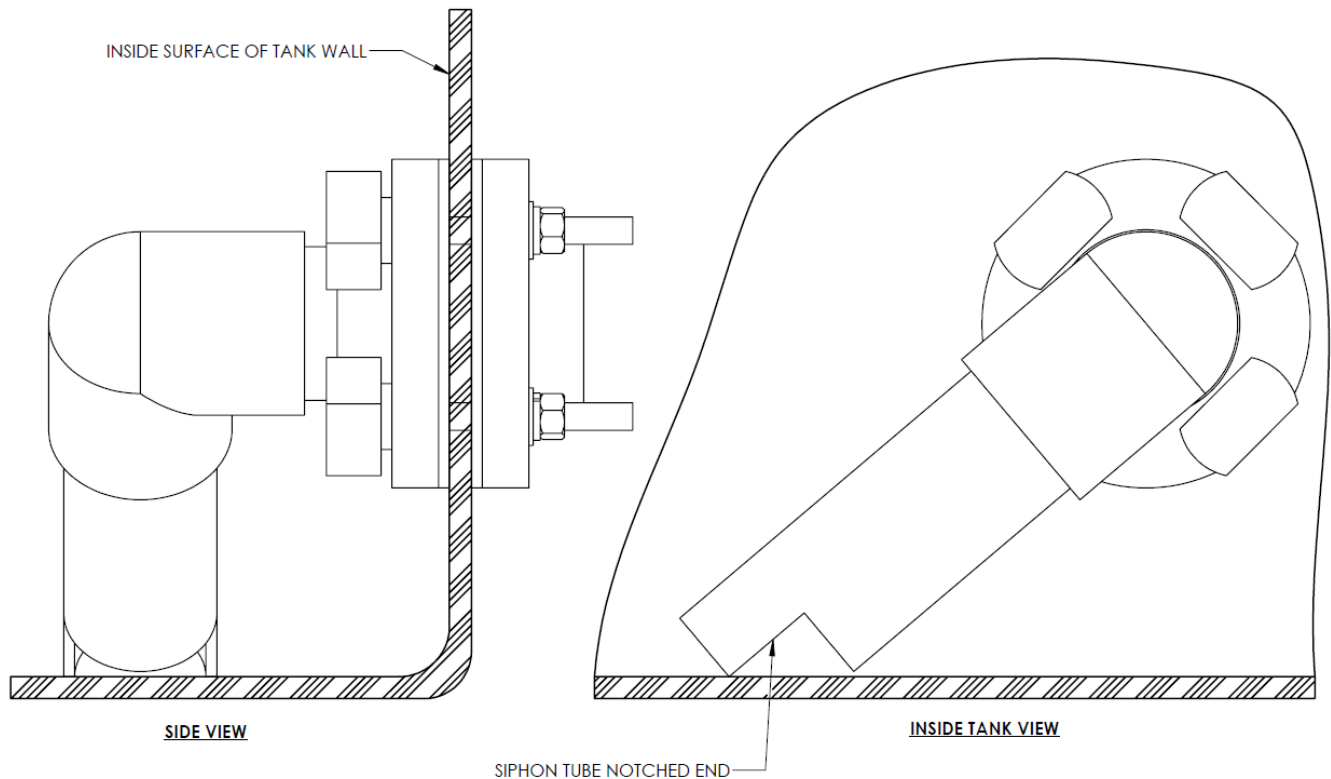


Figure 6.7

6.7.3 Siphon tubes should be located with the cut notch corner in close proximity of the floor of the tank for maximum drainage, and the siphon tube tilted to the side of the fitting. Refer to Figure 6.7 for proper placement of the siphon tube in the tank.

6.8 UNIFIED FITTING OUTLET (UFO™) - FOR USE WITH CAPTOR CONTAINMENT TANKS ONLY

6.8.1 The Unified Fitting Outlet (UFO™) is a flexible outlet device that allows primary tanks to be equipped with sidewall fittings while maintaining a seal between the primary and containment tanks that moves with tank expansion/contraction. The UFO will allow 2 to 4 in. bolted fittings to be utilized while maintaining a flexible containment seal. This option is normally a factory installed option for use with a captor containment tank assembly only. This option can be field installed. Consult factory for more details. The bolted fittings used with this option follow the same sealing/tightening criteria as detailed in sections 6.3 and 6.4. An example of this option (patent RE 39.721) is shown in Figure 6.8.

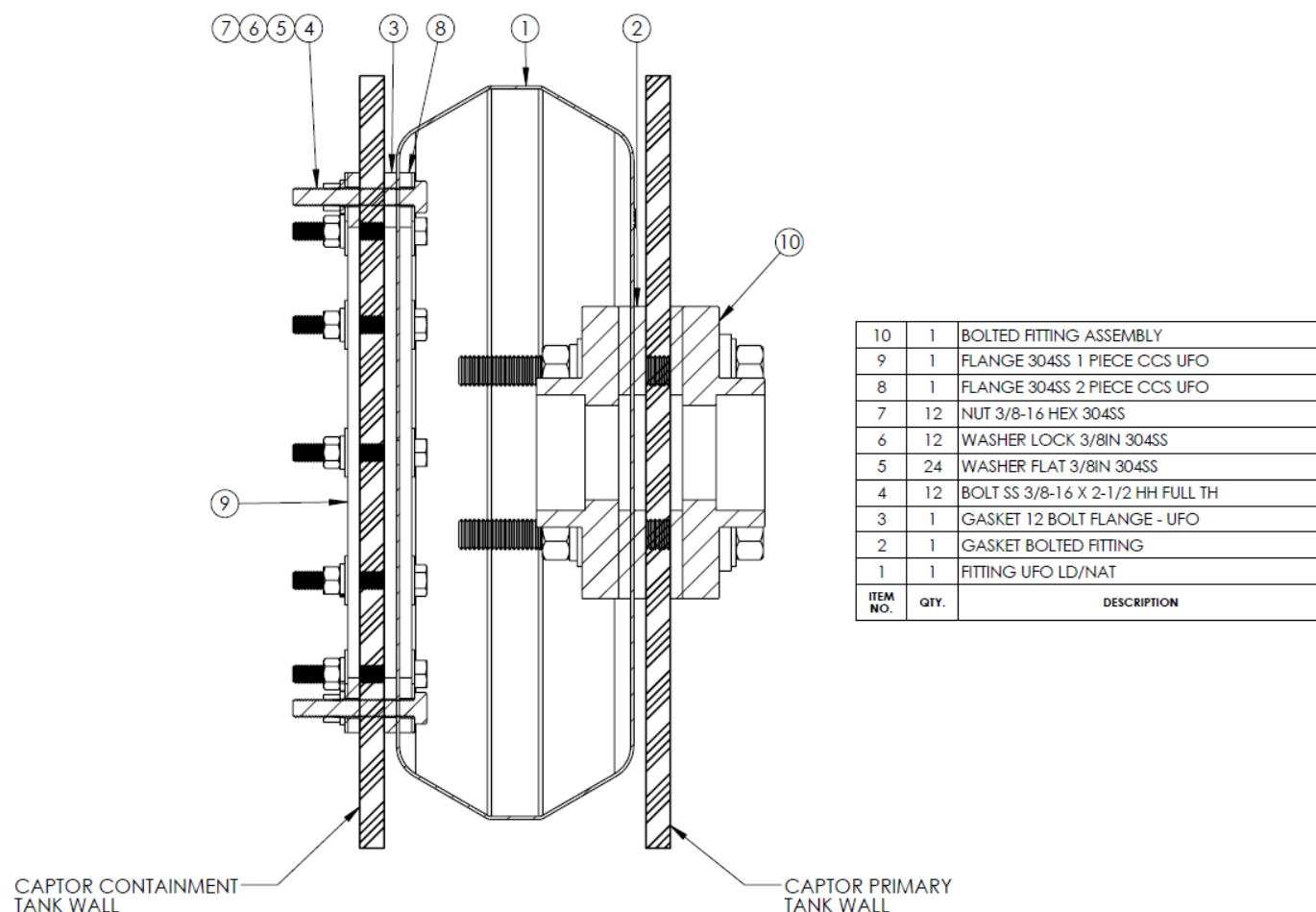


Figure 6.8

6.9 DUAL CONTAINMENT TANK (DCT)

6.9.1 Dual containment tanks can have a sidewall fitting located at the 0°, 90°, 180° or 270° locations with a gasket installed in the interstitial space between the primary and containment tank. This option is normally factory installed for use with DCT tank assemblies. This option can be field installed. Consult factory for more details. The bolted fittings used with this option follow the same sealing/tightening criteria as detailed in sections 6.3 and 6.4. An example of this option is shown in Figure 6.9.

6.9.2 The bolted flange fitting shall be constructed with 2 ea. 150 lb. flanges (C1 and C2), 3 ea. 150 lb. flange gaskets (D1, D2, and D3), the correct number of full threaded bolts (A), bolt gaskets (B), flat washers (E), and hex nuts (F) for the flange specified. NOTE: If the sum of the containment and primary tank wall thicknesses and the interstitial gasket (D3) thickness is greater than or equal to 0.75", fittings with stainless steel bolts will require longer bolts for installation. Consult with the factory for the correct part number when ordering long-bolted flange fittings. Refer to Figure 6.9 for part identification.

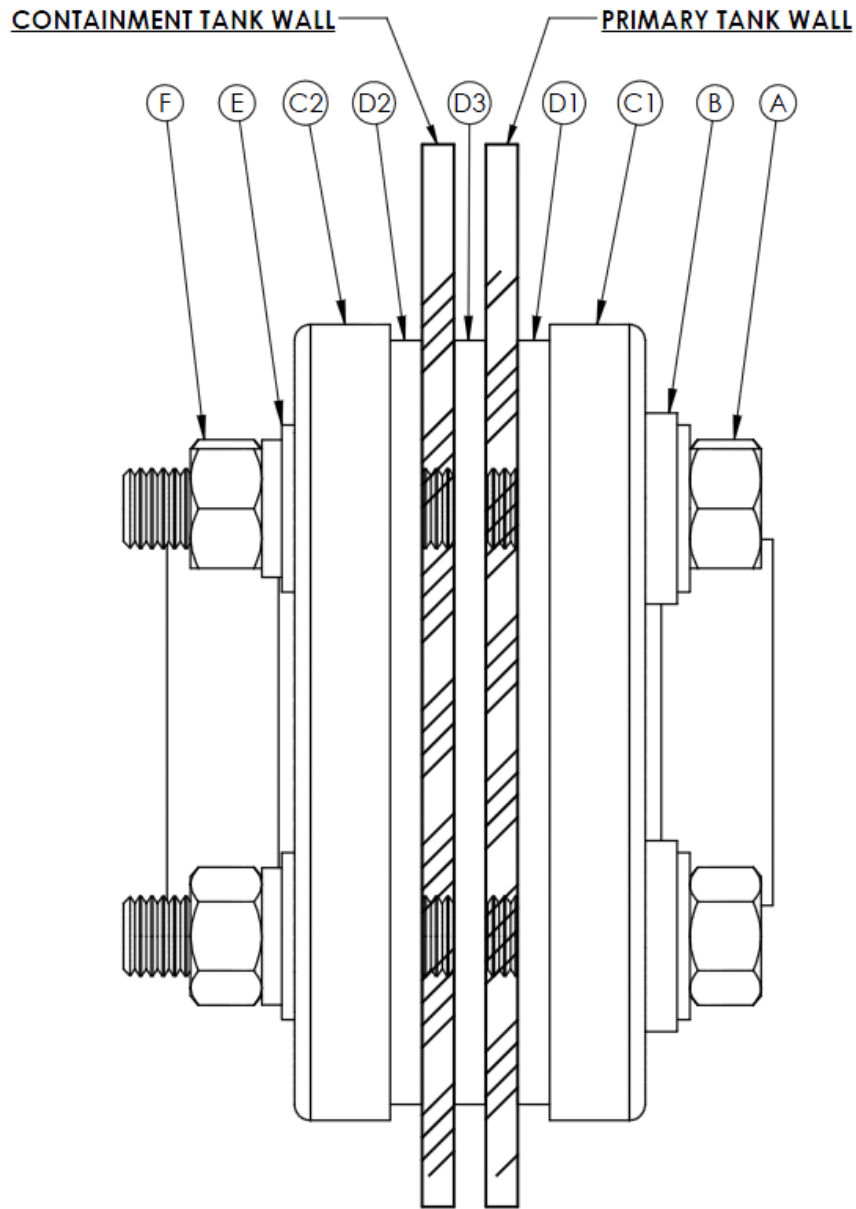


Figure 6.9

7. TANK ATTACHMENTS

7.1 U-VENTS

7.1.1 Standard u-vents are constructed from PVC or CPVC and are provided with a loose male adapter. This allows the u-vent to be cut to the desired height. A threaded or solvent welded socket fitting can be used. U-vents can be purchased with an optional bug screen insert (CPVC holder and fiberglass 17 x 17 screen) installed.

7.1.2 When installing the u-vent in a solvent weld socket fitting, solvent weld the u-vent with the proper solvent cement in the desired position into a previously installed fitting. If the u-vent is to be used in a threaded fitting, solvent weld the male adapter provided to the u-vent, and install the u-vent assembly into a previously installed threaded fitting. Refer to Figure 7.1 for an exploded illustration of this assembly.

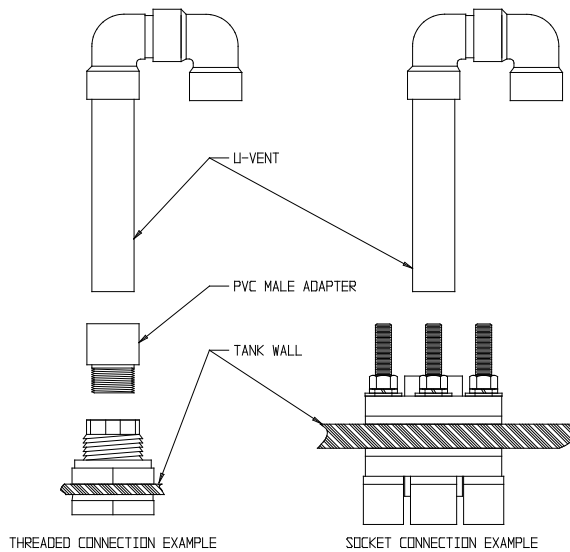


Figure 7.1

7.2 MANWAYS / VENTS – AIR SURGE

7.2.1 The air surge manway (fig 7.2.1) is used in pneumatic fill applications, it provides additional venting (it should never be the main vent) that the primary vent source cannot handle. Installed by running a bead of 3/16" silicone sealant on the underside of the ring (where the screw holes are located). Then place the ring into the opening, once oriented in the direction desired use a screw gun and run 8 each #10 S.S. screws through the small holes in the ring and into the tank. Do not over torque the screws as it may damage the tank, ring, or screws.



Figure 7.2.1

7.2.2 The 18" mushroom vent (fig 7.2.2) or threaded (fig 7.2.3) is a solution to undersized venting problems. Such as: in cases of pneumatic filling. It's a rotationally molded 18" vent that can be attached to any tank that has at least 19" diameter of flat area (non-threaded) or it can be installed in the 18" manway ring (threaded). The vent is installed by simply cutting the hole and attaching it with the 8 screws provided and sealing with silicone (non- threaded) or by removing the threaded manway and threading in the mushroom vent (threaded).

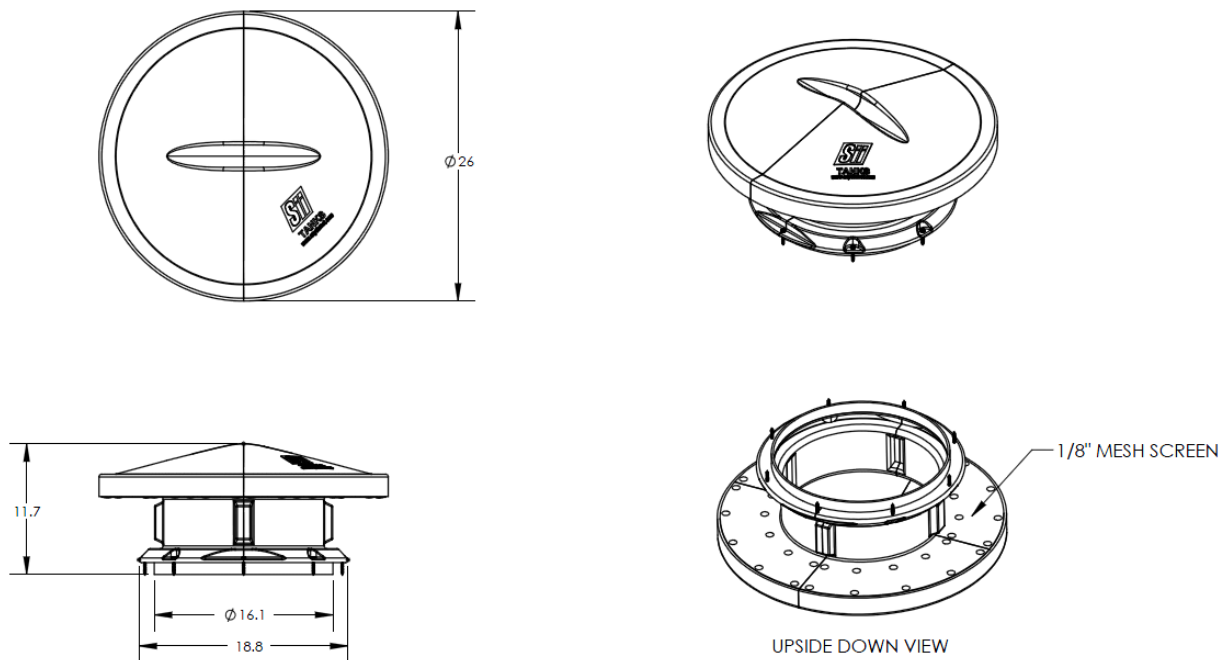


Figure 7.2.2

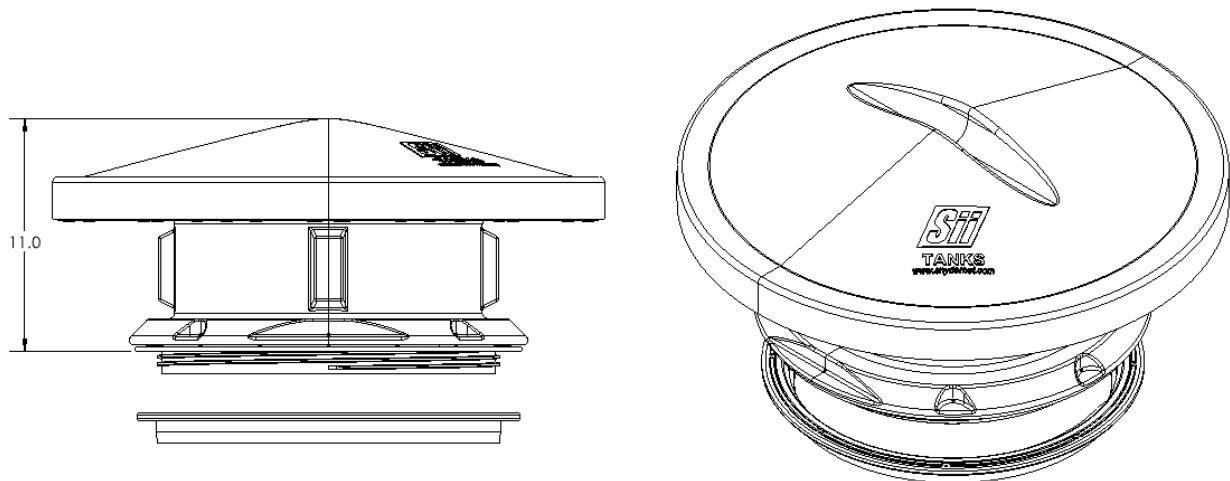


Figure 7.2.3

7.3 DOWN PIPES (TANK FITTING SUPPORTED) - EXTERNAL AND/OR INTERNAL

7.3.1 Down pipes are shipped loose and have been cut to size to meet customer specifications. To maintain warranty, all down pipes shall be supported at 5 ft. maximum intervals with the support structures provided. Internal down pipes are required to have 6" minimum clearance from the tank bottom. For tanks with an overall height greater than 150", the tank bottom clearance must be at least 4% of the overall tank height.

7.3.2 Assemble the piping loosely using Figure 7.3, the guidelines detailed below, and the customer approved tank drawing to ensure all parts are present and cut to meet the customer's requirements. As soon as all parts have been checked, assemble the parts with solvent weld cement and/or threaded connections as shown in Figure 7.3.

7.3.3 Assemble and install support structures as shown in Figure 7.3 (without the saddle clamp covercaps and clips). Make sure the support clamp orientation is correct (with the small width of the wedge toward the

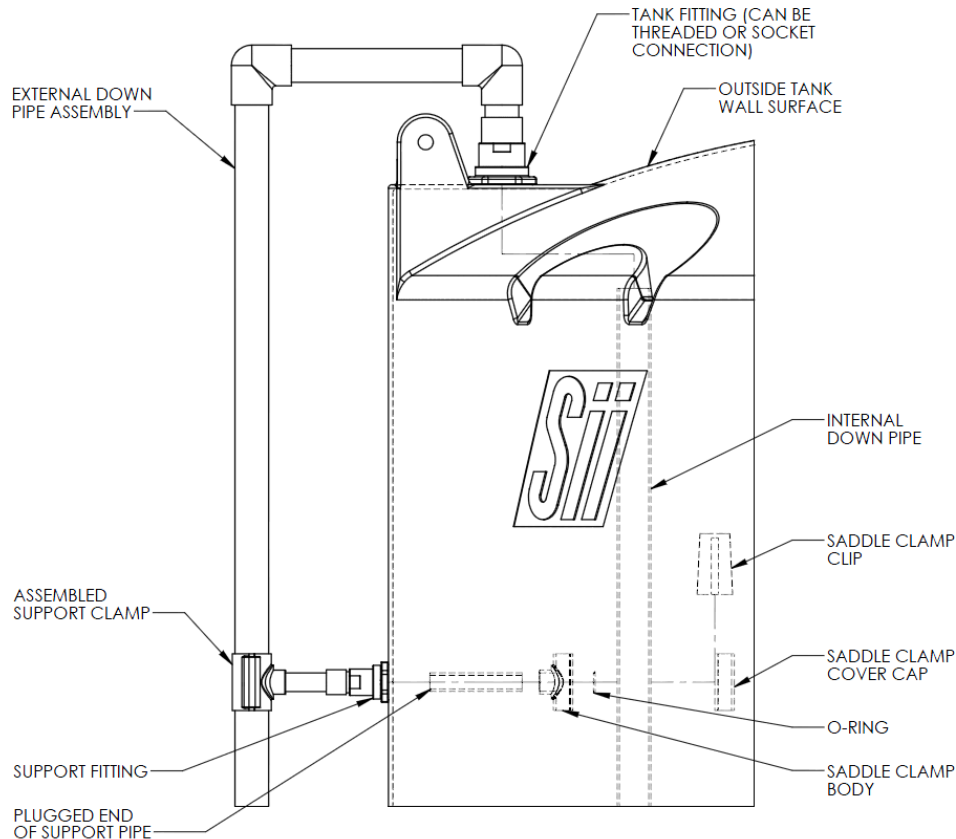


Figure 7.3

top of the tank) and that the plugged support pipes are installed with the plugged end as close to the support fitting as possible. Assemble and install piping as per the customer approved drawing. As piping is being installed on the tank, lock it in place with the saddle clamp cover caps and clips provided (make sure that the sealing o-ring is in the proper position as the pipe is positioned into the saddle support body). Seal all threaded pipe connections with Teflon pipe sealant and connect solvent weld sockets with solvent cement.

7.4 DOWN PIPES (WELDED BOSS SUPPORTED) – INTERNAL ONLY

7.4.1 Down pipes are shipped loose and have been cut to size to meet customer specifications. To maintain warranty, all down pipes shall be supported at 5 ft. maximum intervals with the support structures provided. Internal down pipes are required to have 6" minimum clearance from the tank bottom. For tanks with an overall height greater than 150", the tank bottom clearance must be at least 4% of the overall tank height.

7.4.2 Assemble the piping loosely using Figure 7.4, the guidelines detailed below, and the customer approved tank drawing to ensure all parts are present and cut to meet the customer's requirements. As soon as all parts have been checked, assemble the parts with solvent weld cement and/or threaded connections as shown in Figure 7.4.

7.4.3 Assemble and install support structures as shown in Figure 7.4 (without the saddle clamp cover caps and clips). Since the support fitting does not penetrate the tank wall, the threaded connection to the support fitting does not need pipe sealant. Make sure the support clamp orientation is correct (with the small width of the wedge toward the top of the tank). Assemble and install piping as per the customer approved drawing. As piping is being installed on the tank, lock it in

place with the saddle clamp cover caps and clips provided (make sure that the sealing o-ring is in the proper position as the pipe is positioned into the saddle support body). Seal all threaded pipe connections (except the support fittings) with Teflon pipe sealant and connect solvent weld sockets with solvent cement.

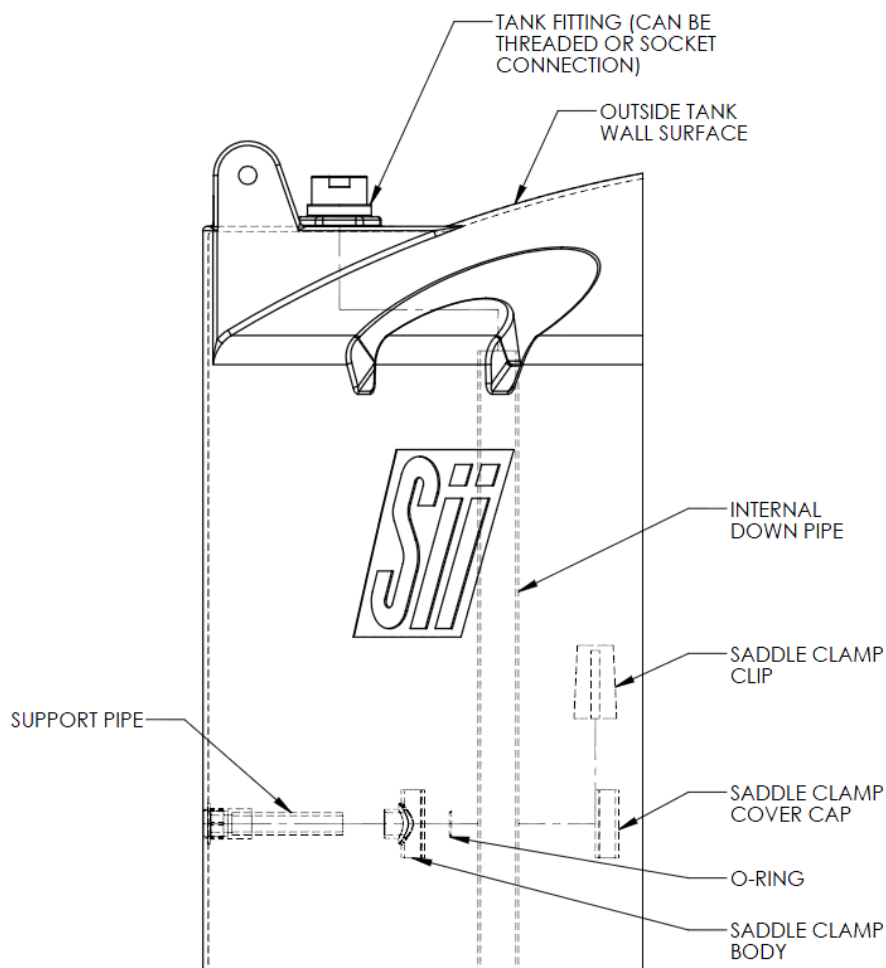


Figure 7.4

7.5 DOWN PIPES (WELDED PE SUPPORTED) – INTERNAL ONLY

7.5.1 Down pipes are shipped installed and have been cut to size to meet customer specifications. To maintain warranty, all down pipes shall be supported with 1 support centered on the down pipe. Internal down pipes are required to have 6" minimum clearance from the tank bottom. For tanks with an overall height greater than 150", the tank bottom clearance must be at least 4% of the overall tank height.

7.5.2 Assemble the piping loosely using Figure 7.5, the guidelines detailed below, and the customer approved tank drawing to ensure all parts are present and cut to meet the customer's requirements. The piping should be inserted into the holes in the welded support structures prior to installing the fitting in the tank. As soon as all parts have been checked, assemble the parts with solvent weld cement and/or threaded connections as shown in Figure 7.5. Seal all threaded pipe connections with Teflon pipe sealant and connect solvent weld sockets with the correct type of solvent cement.

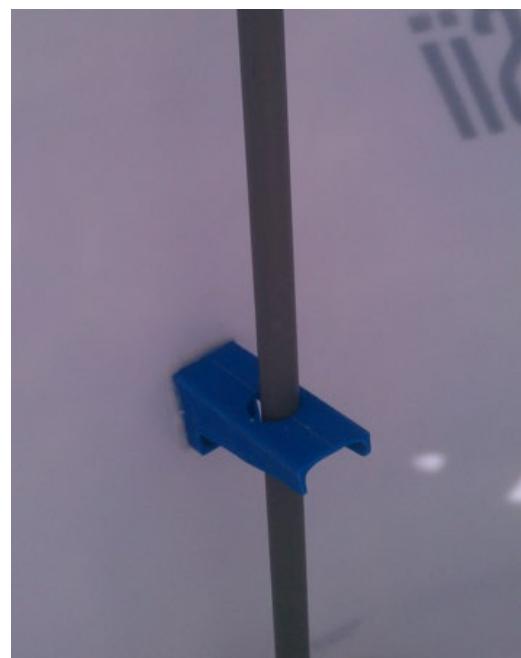
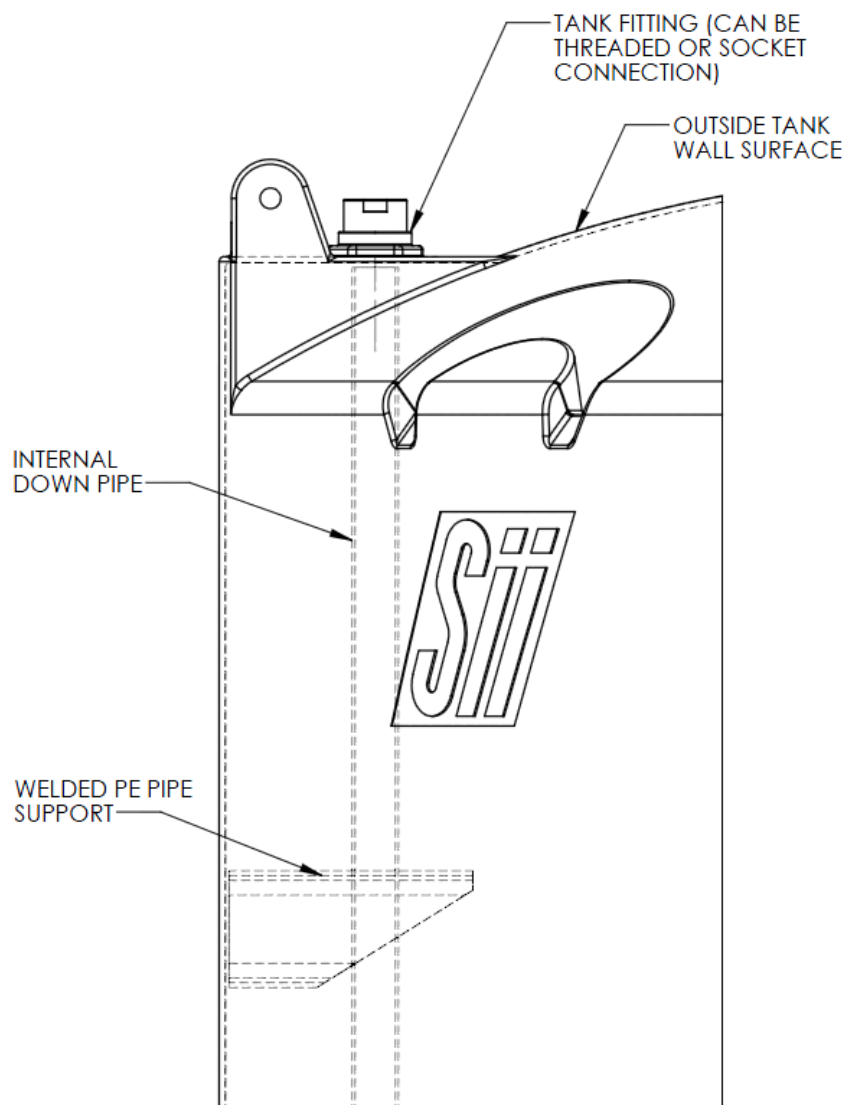


Figure 7.5

7.6 DOWN PIPE - INDEPENDENTLY SUPPORTED / SPINWELD SUPPORTED - (EXTERNAL ONLY)

7.6.1 Down pipes are shipped loose and have been cut to size to meet customer specifications. To maintain warranty, all down pipes shall be supported at 42 in. maximum intervals with the support clamps provided.

7.6.2 Assemble the piping loosely using Figure 7.6, the guidelines detailed below, and the customer approved tank drawing to ensure all parts are present and cut to meet the customer's requirements. Mark the strut post base on the concrete when in proper position. Install 4 ea. 3/8" adhesive anchors (customer supplied) and secure the base into position. As soon as all parts have been checked, assemble the parts with solvent weld cement and/or threaded connections as shown in Figure 7.6.

7.6.3 Assemble and install support structures as shown in Figure 7.6. Make sure the support clamps are spaced evenly. Locate the strut catchers and twist 90° to lock in place. Install the clamps to the strut catchers with the #10 screws provided. Clamps 3 in. and larger require 2 ea. strut catchers, #10 screws and #10 washers. The pipe will click into position in

the clamps. Make sure all clamps have clicked to full engagement and are tight. Assemble and install piping as per the customer approval drawing. Seal all threaded pipe connections with Teflon pipe sealant and connect solvent weld sockets with solvent cement.

7.6.4 Assemble the piping loosely using Figure 7.6.1, the guidelines detailed below, and the customer approved tank drawing to ensure all parts are present and cut to meet the customer's requirements. As soon as all parts have been checked, assemble the parts with solvent weld cement and/or threaded connections as shown in Figure 7.6.1

7.6.5 Assemble and install support structures as shown in Figure 7.6.1 Install the struts using the hardware provided as shown in figure 7.6.1. Locate the clamps/strut catchers and twist 90° to lock in place. The pipe will click into position in the clamps. Make sure all clamps have clicked to full engagement and are tight. Assemble and install piping as per the customer approval drawing. Seal all threaded pipe connections with Teflon pipe sealant and connect solvent weld sockets with solvent cement.

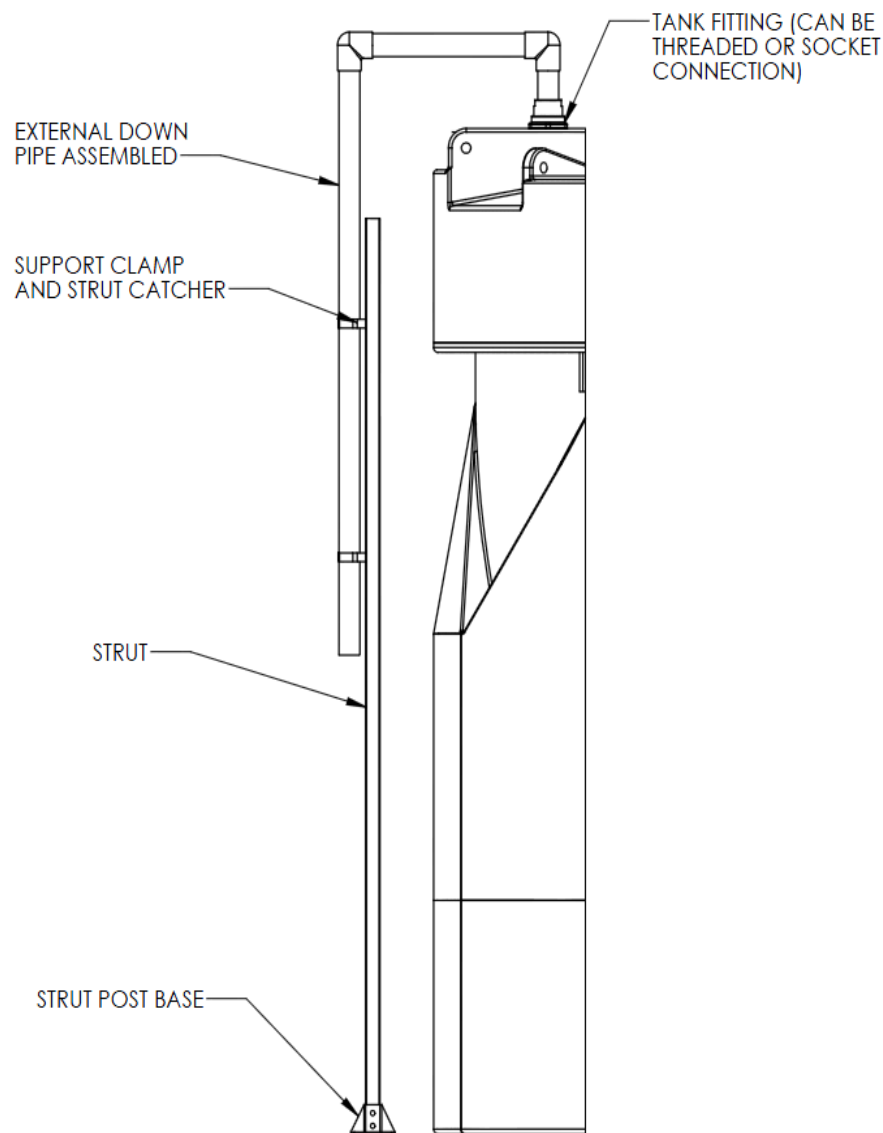
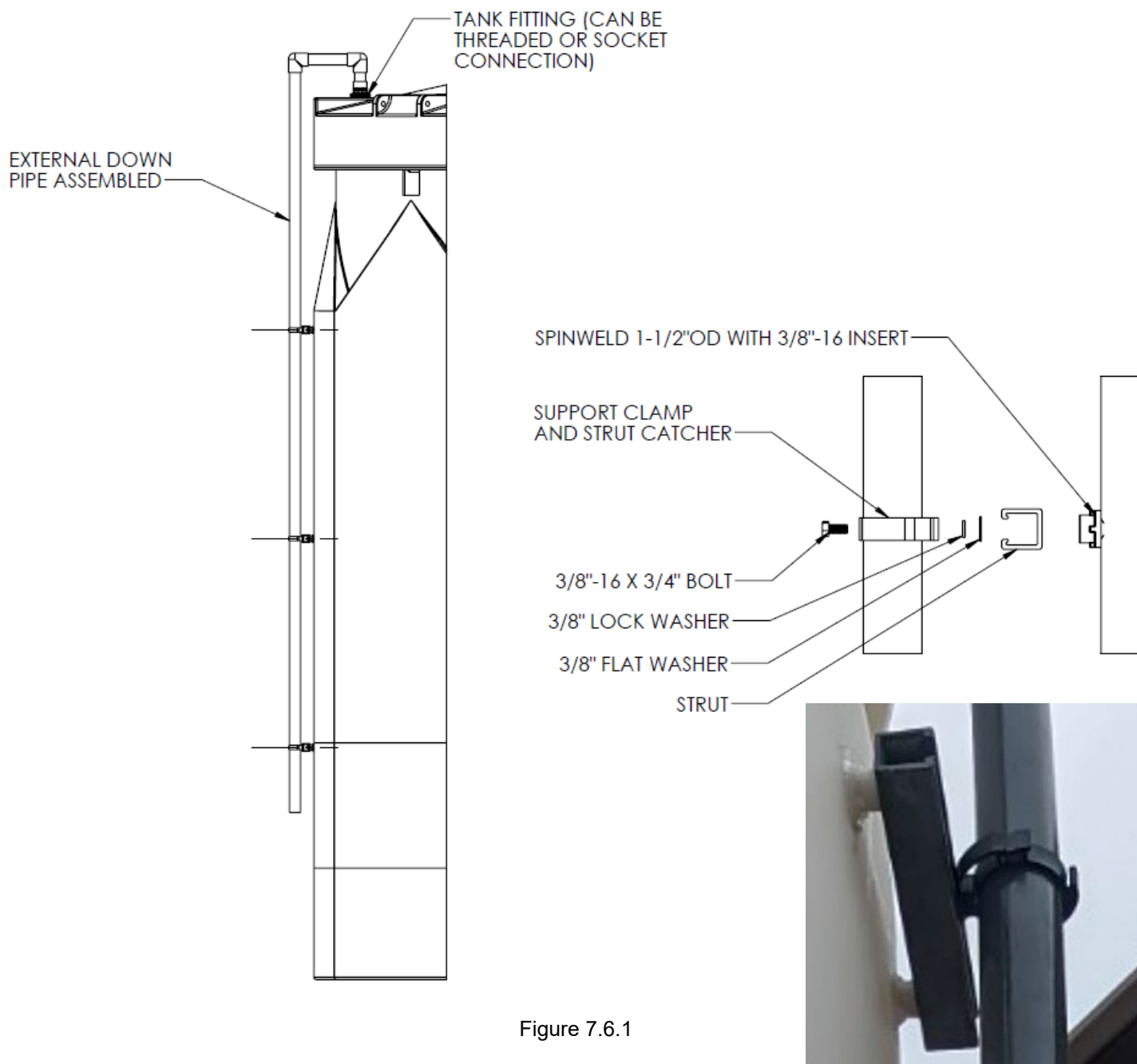


Figure 7.6



7.7 FLEXIBLE SIGHT LEVEL GAUGES

7.7.1 Sight level gauge assemblies are shipped loose and have been cut to size to meet customer specifications. Sight gauges may be ordered with either no valve, 1, 2, or 3 valves. Please refer to the customer approved drawing to determine the number of valves required.

7.7.2 Using the assembly drawings shown in Figure 7.7, verify that all parts are present and assemble the unit per the appropriate drawing. Seal all threaded pipe connections with Teflon pipe sealant. Gallonage decals may be purchased as separate items and customer applied to the tank to assist in indication of tank gallonage. NOTE - Gallonage decals are not available for all tank sizes.

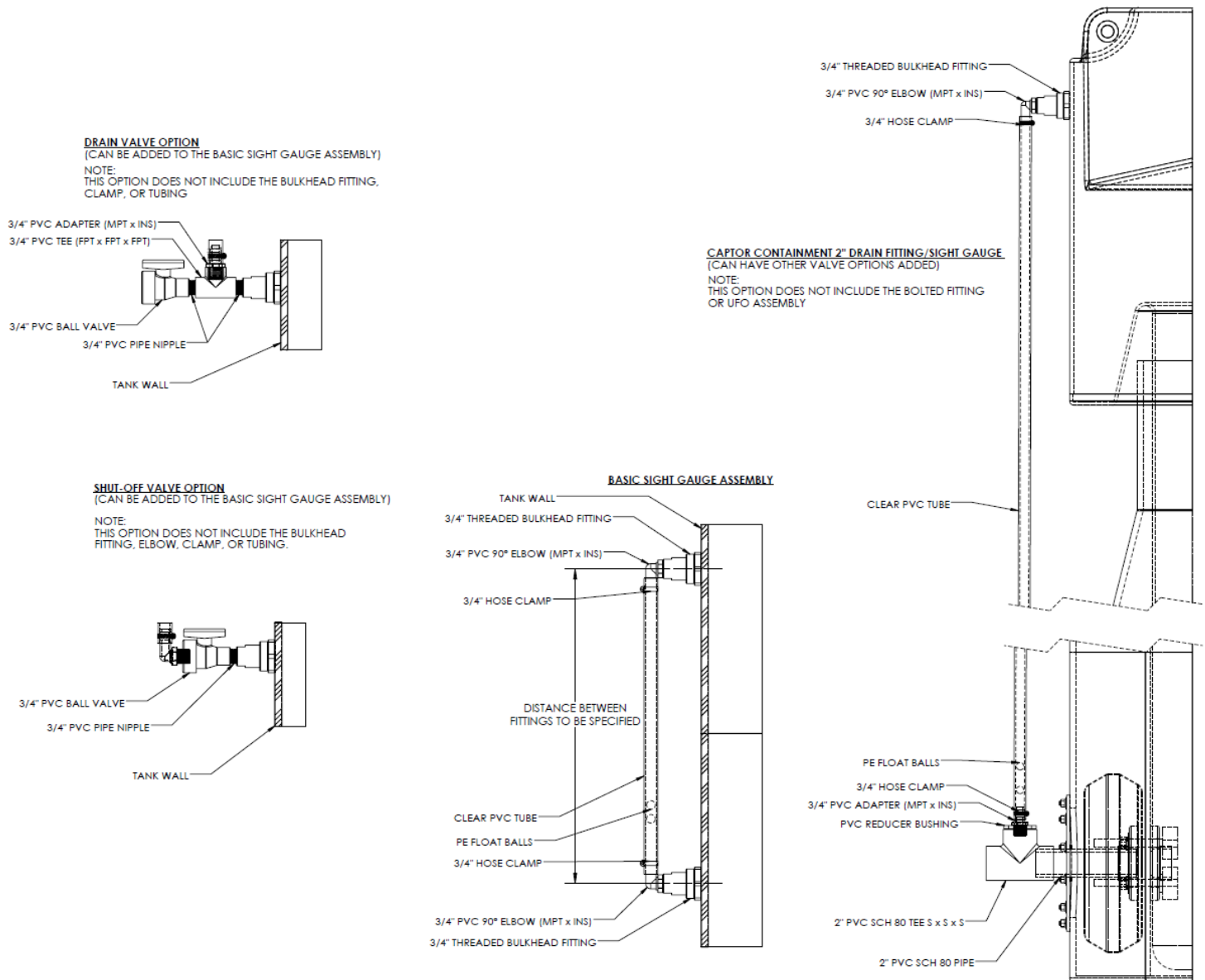


Figure 7.7

7.8 REVERSE LEVEL SIGHT GAUGE (SIDEWALL SUPPORTED – WITH SADDLE CLAMPS)

7.8.1 The component parts (except the rope) have been cut to meet SII and customer specifications. The sight gauge shall be supported at 5 ft. maximum intervals to the liquid holding tank with the support structures provided.

7.8.2 Assemble the piping loosely using Figure 7.8, the guidelines detailed below, and the customer approved tank drawing to ensure all parts are present and cut to length. As soon as all parts have been checked, assemble the parts with solvent weld cement and/or threaded connections as shown in Figure 7.8. NOTE - Do not use solvent weld cement on the outside joints indicated in Figure 7.8. SII recommends periodic inspection of the rollers in the tee assemblies and the rope to ensure proper operation of the gauge. If it is a requirement to seal these joints, a silicone based caulking should be sufficient.

7.8.3 Assemble and install the support structures as shown in Figure 7.8 (without the saddle clamp cover caps and clips). Make sure the support clamp orientation is correct (with the small width of the wedge toward the top of the tank) and that the plugged support pipes are installed with the plugged end as close to the support fitting as possible. Make sure that the indicator board has been installed over the outer pipe supports as shown in Figure 7.8. Assemble and install piping as per the customer approved drawing. As piping is being installed on the tank, lock it in place with the saddle

clamp cover caps and clips provided (make sure that the sealing o-ring is in the proper position as the pipe is positioned into the saddle support body). Seal all threaded pipe connections with Teflon pipe sealant and connect solvent weld sockets with the correct solvent cement (except the joints as noted in Figure 7.8).

7.8.4 With the inner and outer tank pipes in place, connect the rope provided to the tank float (This is accomplished by threading the rope through the center hole in the float and out one of the side holes, double knotting the rope, cutting off any excess material and pulling the rope back so the knot holds under the center hole) and lower it into the inner pipe as shown. Thread the rope through the tee assemblies and the connecting pipe as shown. At this point the float should be at the bottom of the tank, the tee assemblies and connecting pipe should be assembled and sitting off at an angle from the outer clear 2" PVC pipe. With the rope threaded through the outer tee assembly, attach the rope to the indicator in a position parallel with the zero mark on the indicator board. (This is accomplished by threading the rope through the center hole in the indicator, double knotting the rope, checking the indicator position, adjusting as necessary and cutting any excess material protruding from the bottom of the indicator.) Put the indicator into the outer clear 2" PVC pipe while swinging the tee assemblies and connecting pipe into position. With all piping and tee assemblies installed, install the 3" PVC pipe plugs. During the tank hydrotest and first operations of the tank, check the gauge for proper level indication and adjust as necessary. NOTE - This is a gallonage indicator and is not intended as an accurate measuring device.

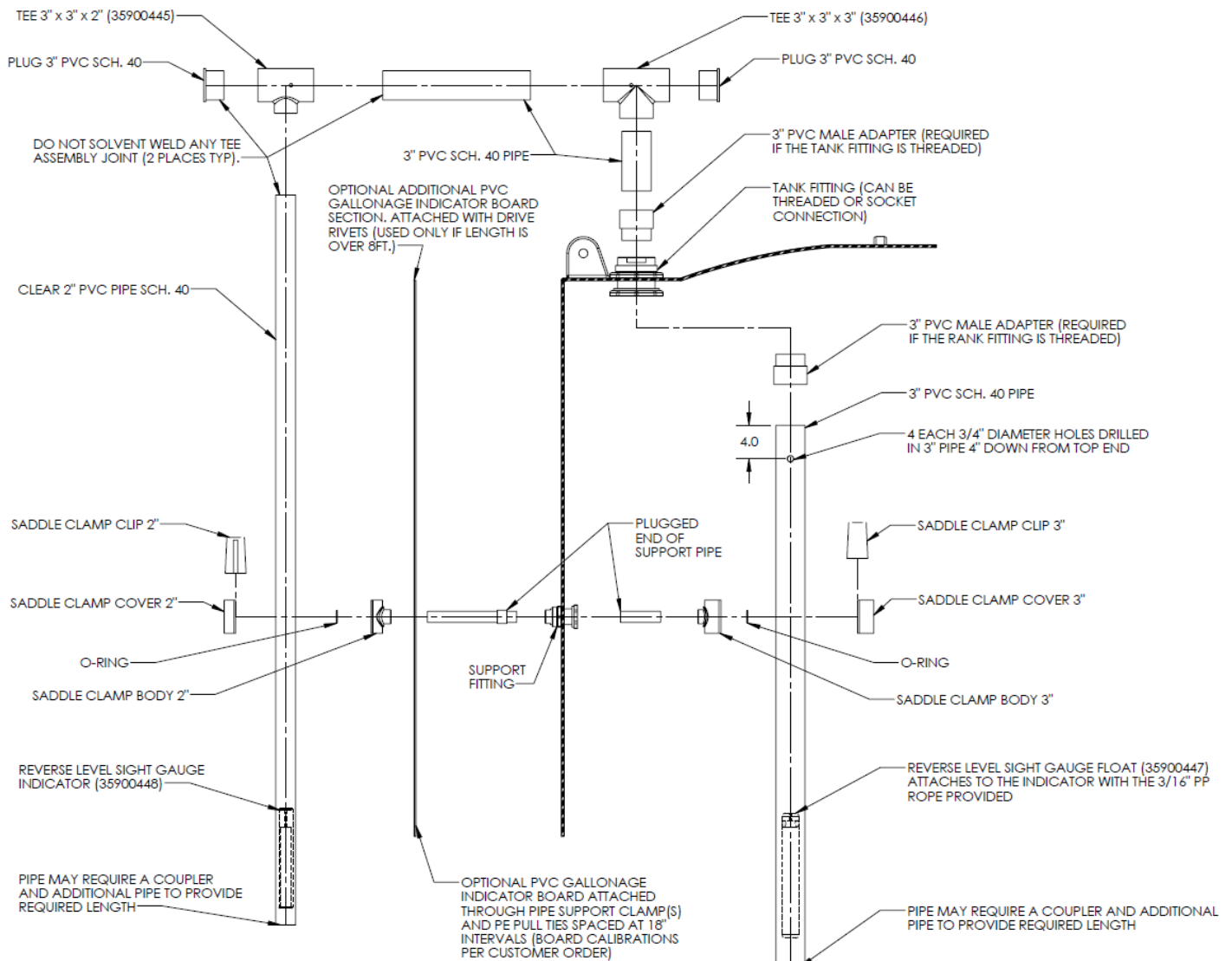


Figure 7.8

7.9 REVERSE LEVEL SIGHT GAUGE (GROUND SUPPORTED – WITH FRP STRUT SYSTEM)

7.9.1 The component parts (except the rope) have been cut to meet SII and customer specifications. The external piping of the sight gauge shall be supported at 24 in. to 42 in. intervals to the FRP strut channel with the strut catchers and pipe clamps provided. Internal piping and welded supports will be installed in the factory by SII prior to shipping.

7.9.2 Assemble the piping loosely using Figure 7.9, the guidelines detailed below, and the customer approved tank drawing to ensure all parts are present and cut to length. As soon as all parts have been checked, assemble the parts with solvent weld cement and/or threaded connections as shown in Figure 7.9. NOTE - Do not use solvent weld cement on the PVC plugs as indicated in Figure 7.9 to allow for periodic inspection of the rollers in the tee assemblies and the rope to ensure proper operation of the gauge. If it is a requirement to seal these joints, a silicone based caulking should be sufficient.

7.9.3 Mark the strut post base on the concrete when in proper position. Install 4 ea. 3/8" adhesive anchors and secure the base into position. Make sure that the gallon indicator board (if ordered) has been installed between the strut catcher and pipe clamp as shown in Figure 7.9. Assemble and install piping as per the customer approved drawing. As piping is being installed on the tank, squeeze the pipe clamps together to secure the pipe to the FRP channel.

7.9.4 With the inner and outer tank pipes in place, connect the rope provided to the tank float (This is accomplished by threading the rope through the center hole in the float and out one of the side holes, double knotting the rope, cutting off any excess material and pulling the rope back so the knot holds under the center hole.) and lower it into the inner pipe as shown. Thread the rope through the tee assemblies and the connecting pipe as shown. At this point the float should be at the bottom of the tank, the tee assemblies and connecting pipe should be assembled and sitting off at an angle from the outer clear 2" PVC pipe. With the rope threaded through the outer tee assembly, attach the rope to the indicator in a position parallel with the zero mark on the indicator board. (This is accomplished by threading the rope through the center hole in the indicator, double knotting the rope, checking the indicator position, adjusting as necessary and cutting any excess material protruding from the bottom of the indicator.) Put the indicator into the outer clear 2" PVC pipe while swinging the tee assemblies and connecting pipe into position. With all piping and tee assemblies installed, install the 3" PVC pipe plugs. During the tank hydrotest and first operations of the tank, check the gauge for proper level indication and adjust as necessary. NOTE - This is a gallonage indicator and is not intended as an accurate measuring device.

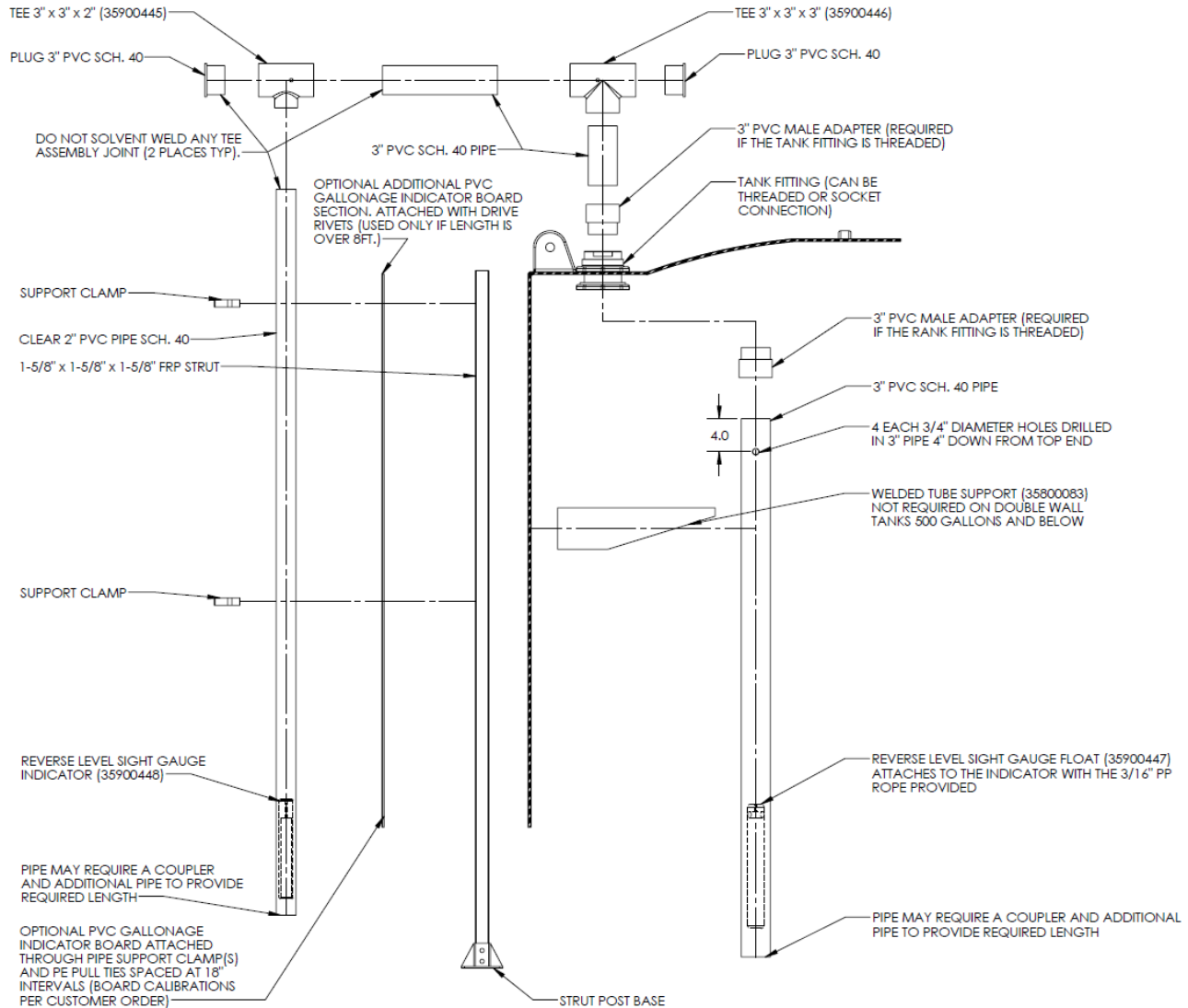


Figure 7.9

7.10 ULTRASONIC LEVEL INDICATOR

7.10.1 Install the PE bulkhead fitting per section 6.1 for sensors with male pipe threads. Install the sensor into the fitting with Teflon® pipe sealant. Remove the display unit box cover. Attach the display unit to the PE mounting plates provided on the tank with 4 ea. #10 S.S. Self-tapping screws. Attach the sensor cable to the control box with small strain relief and connect wires per label in the box. Please see Figure 7.10 below for sensor wire attachment information. Attach the unit to 110 VAC and test unit. The display unit is preprogrammed for the tank ordered. Refer to literature shipped with unit to answer any additional questions.

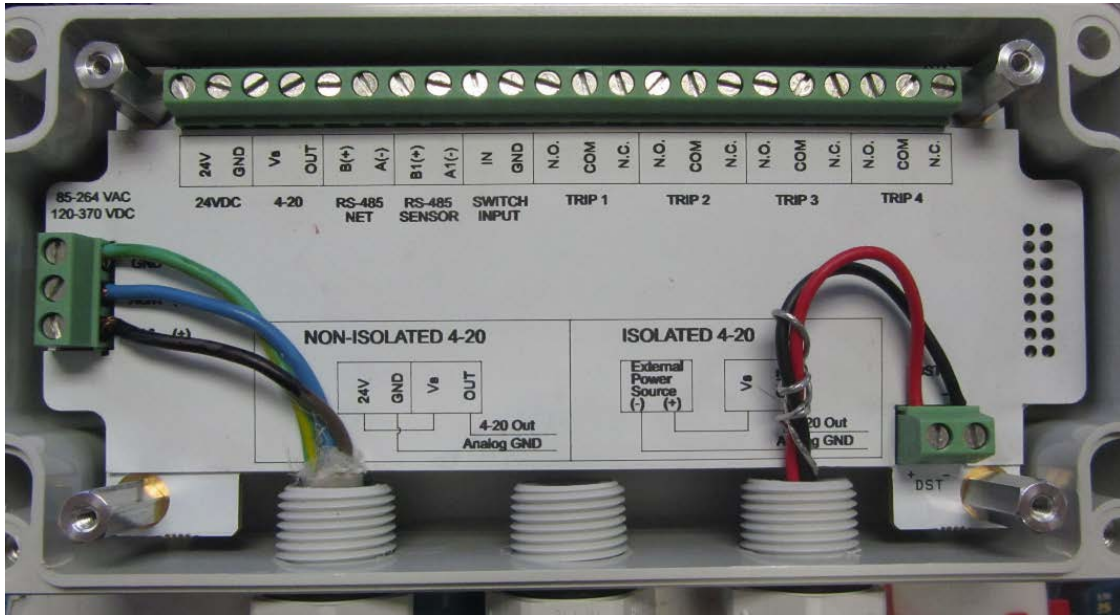


Figure 7.10 P/N 34701515 / 34702356

7.11 LEAK DETECTOR UNIT (FOR USE WITH CAPTOR CONTAINMENT TANKS ONLY)

7.11.1 The leak detector unit consists of a proximity sensor, 2 in. FPT fitting connection, 2 in. bung plug, $\frac{3}{4}$ in. strain relief, and an indicator box. Install the $\frac{3}{4}$ in. strain relief into the 2 in. bung plug. Loosely install the proximity sensor cord into the strain relief with the sensor face to the inside of the plug assembly. Make sure the proximity sensor is set to NC (normally closed). Place the sensor in the interstitial space between the primary and secondary tanks approximately 1 in. above the tank bottom and securely tighten the strain relief to hold the sensor and sensor cord into position. Remove the indicator box cover. Attach the indicator box to the PE mounting plates provided on the tank with the 2 ea. #10 S.S. self-tapping screws. Attach the sensor cable to the control box with small strain relief and connect wires per label in the box. Please see Figure 7.11. Connect unit to 110 VAC per label in the box using strain relief provided or other acceptable methods and test the unit. The indicator box will show a green light when power is on and the sensor is not detecting a liquid. The light is a push to test light allowing the operator to test for power outage or malfunction. If the green light goes out there are two possibilities. If the green light does not come on when the button is pushed, this would indicate a lack of power to the unit or the light bulb is burned out. If the green light comes on when pushed, then a possible leak condition is indicated.

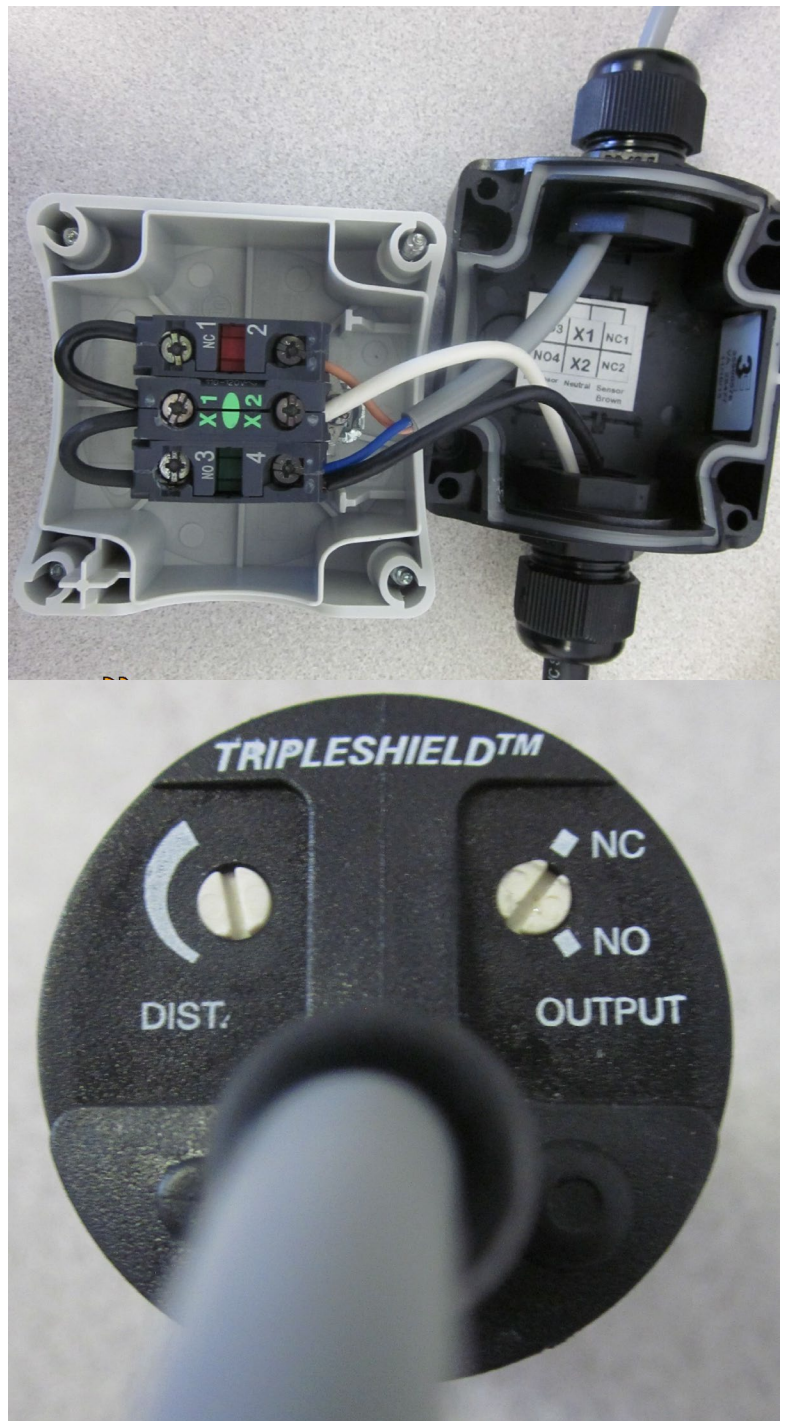
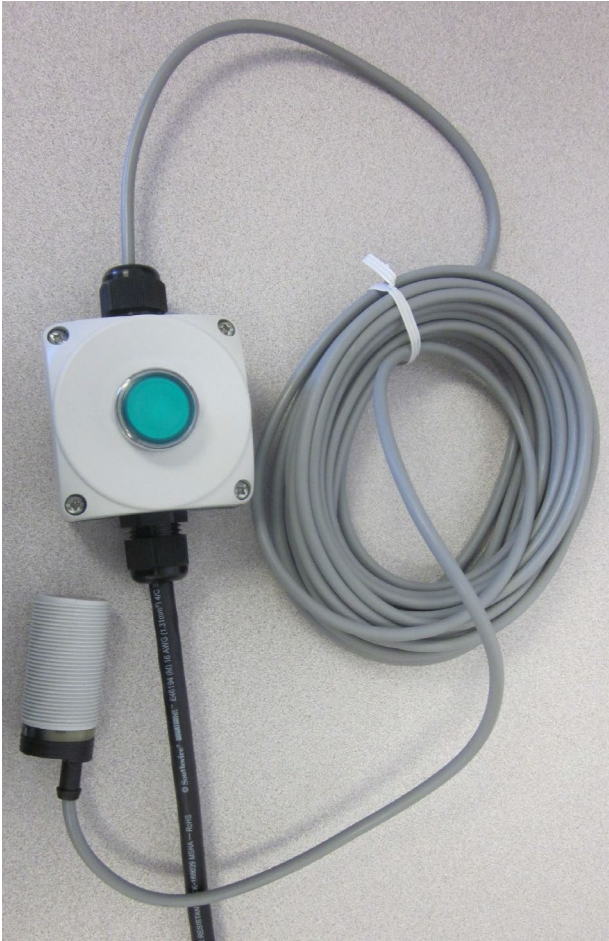


Figure 7.11

Standard Leak Detection System: #34701030 / #34702075

Specification Sheet <https://www.snydernet.com/Portals/0/PDF/Industrial-PDF/misc/LeakDetectionSensor-Snyder.pdf>



Leak Detector Sensor with Audible & LED Light Alarm & output relay option #34702757

Manual : <https://www.snydernet.com/guidelines-for-use/Audible-Leak-Detection-System-LDA-1C.pdf>

7.12 FLANGE ADAPTERS

7.12.1 Standard flange adapters are constructed from PVC or CPVC and may be purchased for solvent weld socket fittings or threaded fittings. Flange adapters for threaded fittings are provided with loose male adapter to allow the customer to adjust adapter length and flange position to match the piping at the installation. Refer to Figure 7.12 for an illustration of a flange adapter.

7.12.2 When installing the flange adapter in a solvent weld socket fitting, cut the flange adapter pipe to desired length (factory supplied 12" length) and solvent weld the flange adapter with the proper solvent cement in the desired position in a previously installed fitting. If the flange adapter is to be used in a threaded fitting, install the male adapter into the fitting with Teflon® pipe sealant, cut the flange adapter to the desired length, and solvent weld the flange adapter to the male adapter in the desired position with the proper solvent cement.

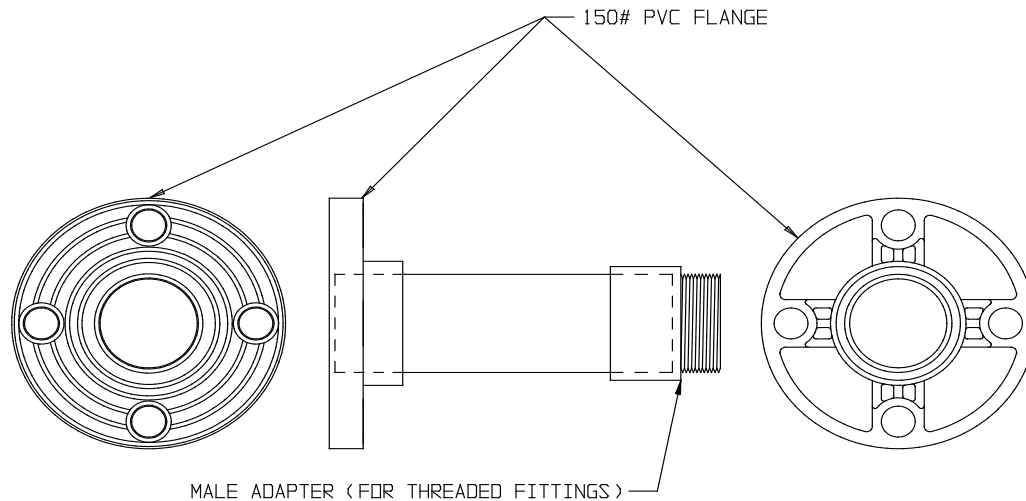


Figure 7.12

7.13 Flexmaster Expansion Joints

7.13.1 Service Conditions:

- .2. The expansion joints are intended for use in low pressure (< 20 PSIG) piping applications or for use as the inlet of a flooded suction feed connection. The maximum use temperature of the expansion joints is 130°F for HDLPE materials and 140°F for XLPE materials.
- .3. The application must be properly defined for the expansion joint. Application design movement must not exceed the design movement of the expansion joint. Please refer to the chart attached for design movement capabilities and spring rates. Also refer to the piping examples for proper installation examples. If the application exceeds the design capabilities of the expansion joint, please contact the manufacturer.

7.13.2 Alignment:

- .1. Expansion joints are not designed to make up for piping misalignment error. Pipe misalignment should be no more than 1/4" in any direction.

7.13.3 Pipe Support:

- .1. Piping must be supported in all directions so expansion joints to not carry any piping weight. Pipe supports should be placed directly after the Flexmaster. Do not place pipe support in front of the Flexmaster that can restrict pipe movement/deflection.

7.13.4 Installation:

- .2. Unbolt and remove split flanges from the faces of the expansion joint. Check to make sure the flange faces are clean and free of foreign materials. Flange faces should be free of any scratches or nicks. If scratches or nicks occur, sand the surface smooth with 220 grit sand paper using a random orbital sander.
- .3. Locate the expansion joint between two 150# flanges spaced for the prescribed neutral length + 1/2" (the thickness of two full face 150# flange gaskets). Install bolts as shown in the drawing below. To obtain proper gasket compression, tighten all the fitting nuts hand tight using an opposing bolt tightening sequence until the gaskets engage the flanges and the lock washers are compressed. Tighten each nut an additional 5/8 turn – 1-3/8 turns using the same sequence (do not tighten more than 1/2 turn at a time). A light application of lubricating oil is necessary to prevent thread seizing on S.S. bolts. Gasket compression should be between 25 - 50%. Tighten bolts to achieve gasket compression. Recheck fitting tightness periodically.

FLEXMASTER EXPANSION JOINTS										
NOMINAL SIZE I.D.	NEUTRAL LENGTH (IN.)	+/- AXIAL MOVEMENT	+/- LATERAL MOVEMENT	ANGULAR DEFLECTION	AXIAL SPRING RATE LBS/IN	LATERAL SPRING RATE LBS/INS	# HOLES	BOLT PATTERN	BOLT SIZE	WEIGHT (LBS)
2	20.71	4	2	5	N/A	N/A	4	150#	5/8"	8.44
3	31.5	4	2	5	27.3	6.6	4	150#	5/8"	13.86

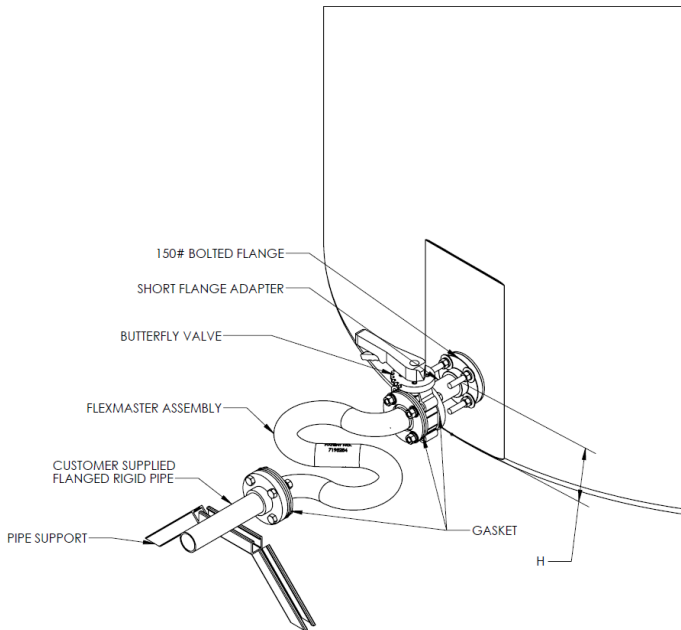
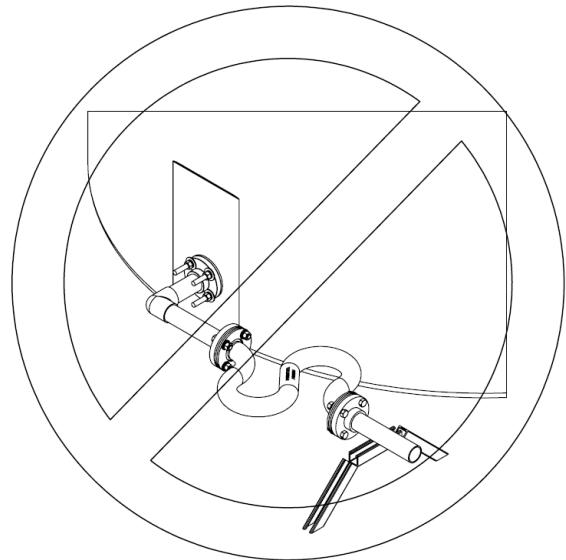


Figure 7.13



THIS IS AN UNACCEPTABLE FLEXMASTER EXPANSION JOINT INSTALLATION

Figure 7.13.1

With the Flexmaster expansion joint installed horizontally as shown in 7.13, dimension "H" can be up to 50" maximum and still meet the SII recommendation of 4% dimensional movement design. If the height of the fitting is above 50", install the Flexmaster in a vertical configuration as shown in Figure 7.13.3.

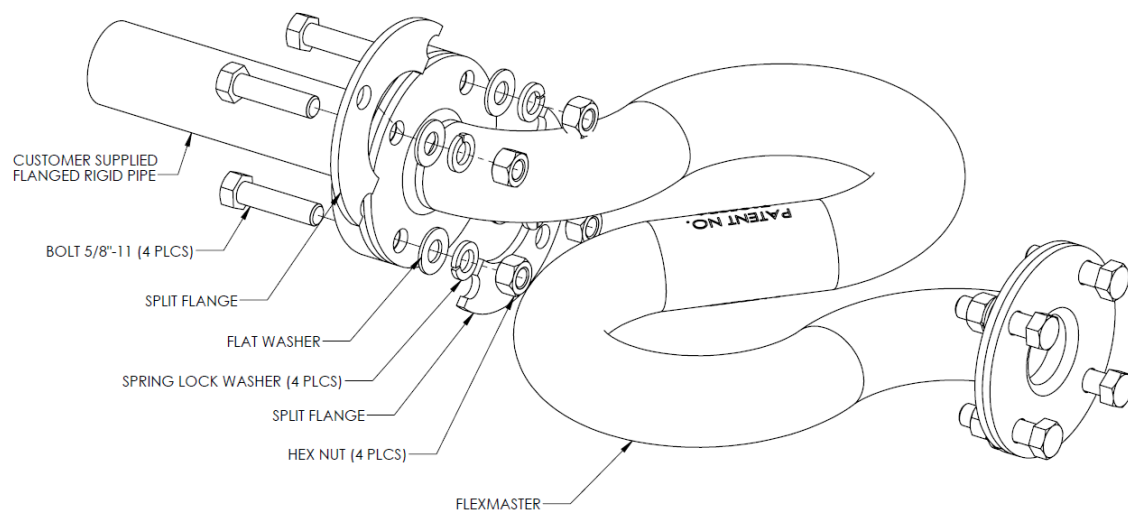


Figure 7.13.2 – Exploded Assembly

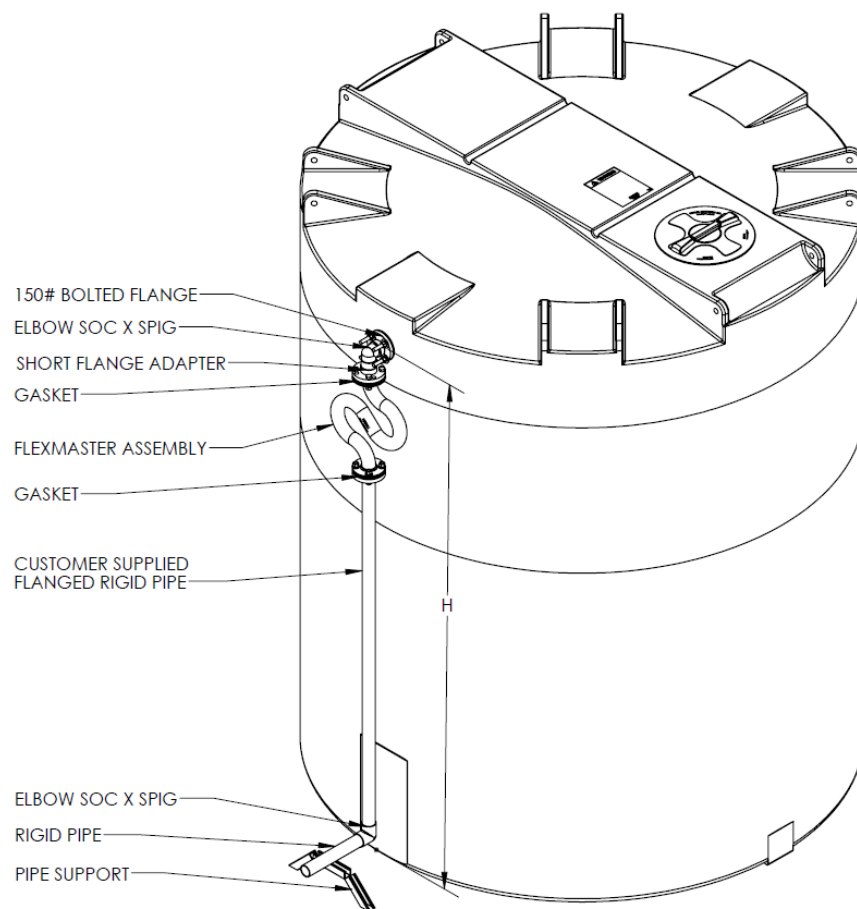


Figure 7.13.3

With the Flexmaster expansion joint installed vertically as shown in the example above, dimension “H” can be up to 100” maximum and still meet the SII recommendation of 4% dimensional movement design. If the height of the fitting is above 100”, an additional Flexmaster can be installed in the vertical configuration to provide additional movement capability.

8. TANK ACCESSORIES

8.1 WIND/SEISMIC TANK RESTRAINT SYSTEM (FLAT BOTTOM TANKS)

8.1.1 The wind/seismic tank restraint system is designed for tank restraint on an appropriate concrete pad under 150 MPH wind or IBC/CBC seismic requirements. Site specific calculations are available from Snyder Industries as a purchased option. Using the assembly drawing and table sent with the assembly, verify that all parts are present. Please see Figure 8.1 for a restraint system installation and assembly information.

8.1.2 Locate the tank on the concrete pad as desired. Lay out all anchors required (4 or 8) equally spaced, (4 anchors must be directly below the tank tie down locations). Make sure all anchors are located next to the tank with the front face of the anchor weldment located next to the tank. Mark all the anchor bolt locations, remove the anchors and install the required Hilti adhesive model HVA anchor bolts as specified in the assembly drawing and table sent with the assembly. These anchor bolts are not provided by the manufacturer and must be purchased by the customer. Customer must follow all Hilti anchor bolt installation instructions.

8.1.3 Replace the anchors and secure the anchors to the concrete. Fasten the tank to the concrete pad with the required cable (make sure the cable sheath is on the cable and located around the lug locations) as shown by the assembly drawing utilizing the cable thimbles and clamps provided. Tension the cable before filling the tank to remove cable looseness. Do not over-tension the cables as this may cause tank damage. The cable tension will change with tank loading and temperature changes - DO NOT re-tension the cables.

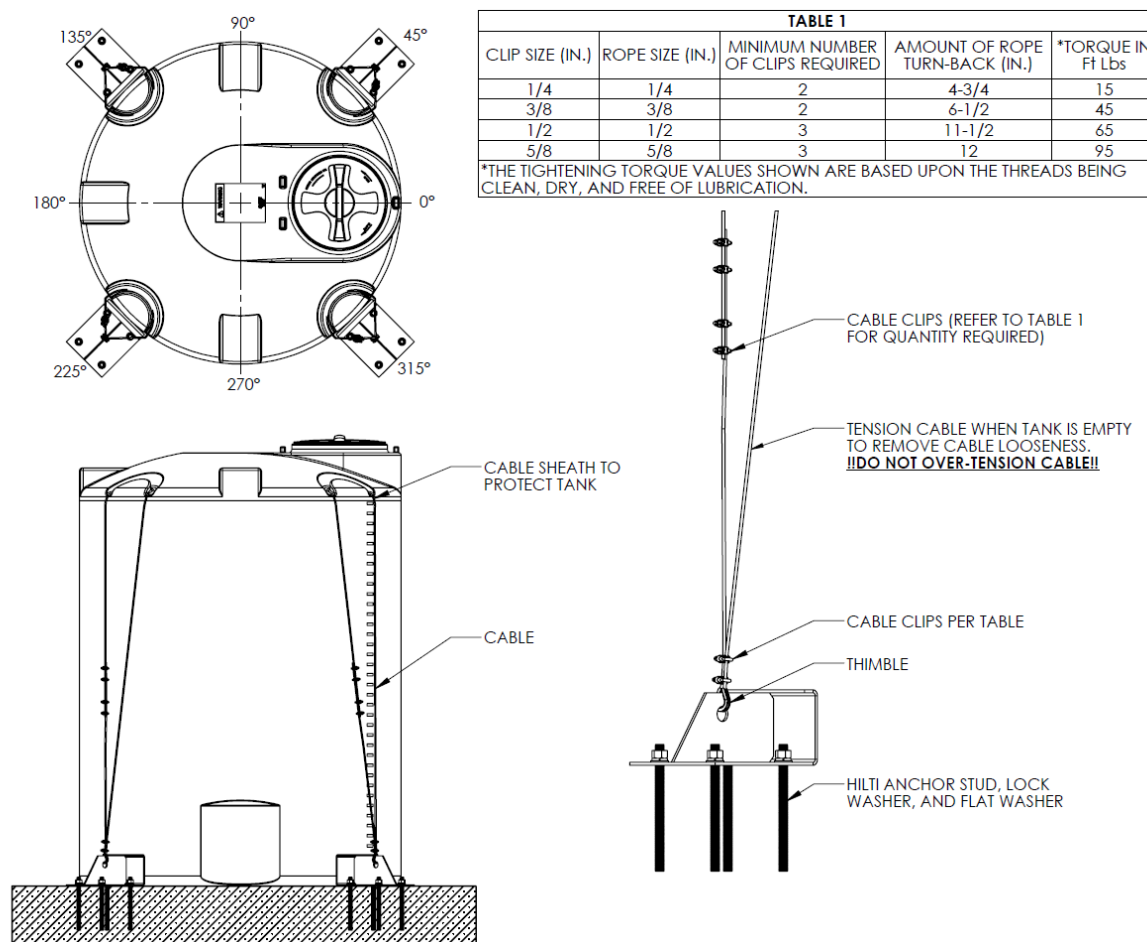


Figure 8.1

8.2 WIND/SEISMIC TANK RESTRAINT SYSTEM (CONE BOTTOM TANKS)

8.2.1 The wind/seismic tank restraint system is designed for cone bottom tank restraint on an appropriate concrete pad under 150 MPH wind or IBC/CBC seismic conditions using a SII cone stand for proper tank support. Using the assembly drawing and table shown in Figure 8.2, verify that all parts are present.

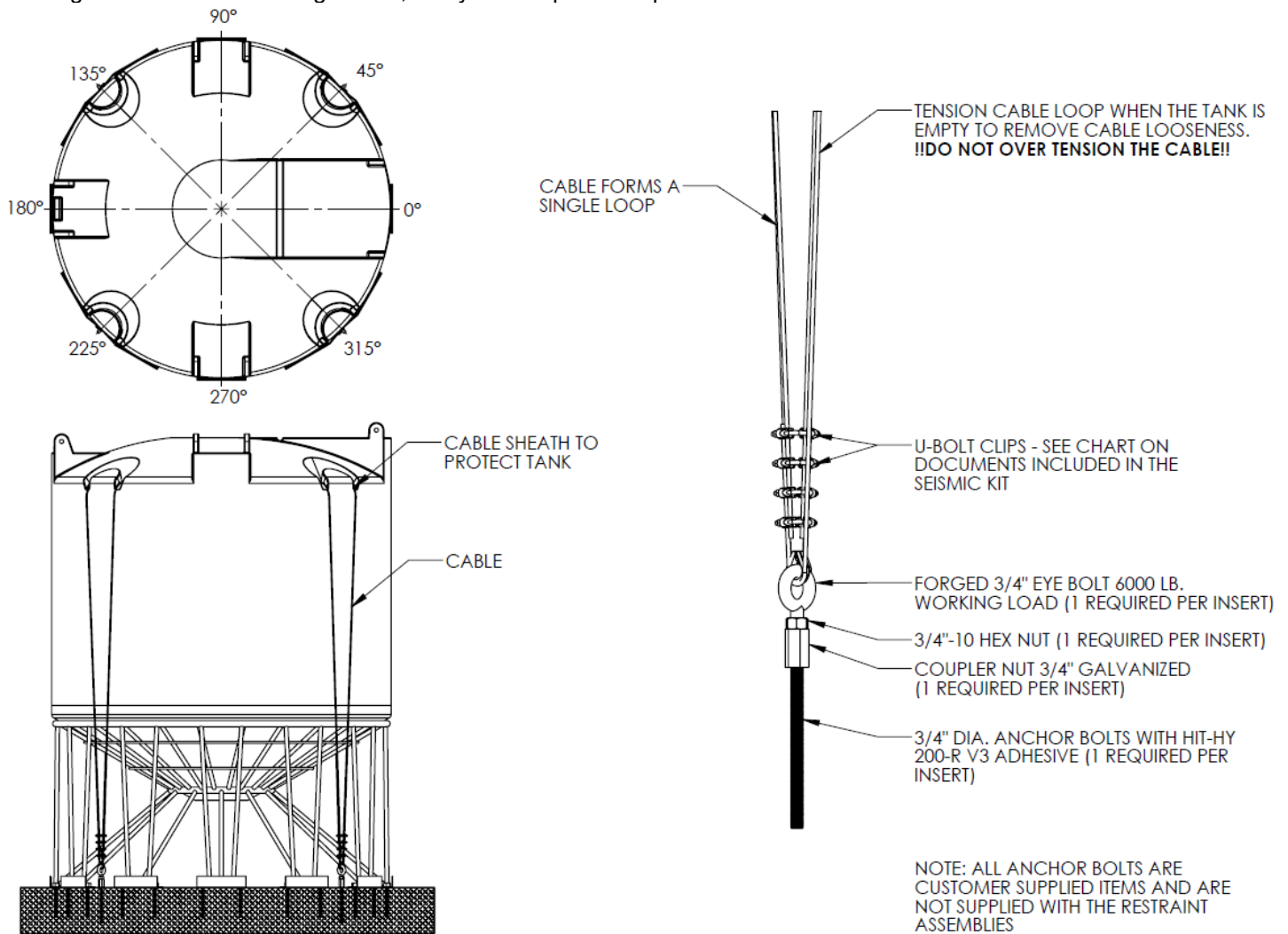


Figure 8.2

8.2.2 Locate the tank and stand on the concrete pad as desired. The pad required for the restraint system must be 24" larger in diameter than the tank diameter for proper application of 3/4" adhesive anchor bolts (assumes 10" edge distance required). Lay out the four anchors provided directly below the tank tie down locations. Make sure all anchors are located so the hole in the anchor aligns with the tank wall. Mark all the anchor bolt locations (stand and anchor positions), remove the stand and anchors and install the required Hilti adhesive model HVA anchor bolts as specified by the assembly drawing and the SII seismic restraint drawing B-3182. These anchor bolts are not provided by the manufacturer and must be purchased by the customer.

8.2.3 Replace the stand and anchors and secure to the concrete pad. Install the 3/4" eyebolts loosely as shown by the drawing. Fasten the tank to the concrete pad with the required cable (make sure the cable sheath is on the cable and located around the lug locations) as shown by the assembly drawing utilizing the cable thimbles and clamps provided. Tension the cable before filling the tank to remove cable looseness. Do not over-tension the cables as this may cause tank damage. The cable tension will change with tank loading and temperature changes - DO NOT re-tension the cables.

8.3 WIND/SEISMIC TANK RESTRAINT SYSTEM (WITH NO MOLDED IN LUGS)

8.3.1 The wind/seismic tank restraint system is designed for tanks with no molded in lugs on an appropriate concrete pad under 150 MPH wind. Using the assembly drawing and table shown in Figure 8.3, verify that all parts are present.

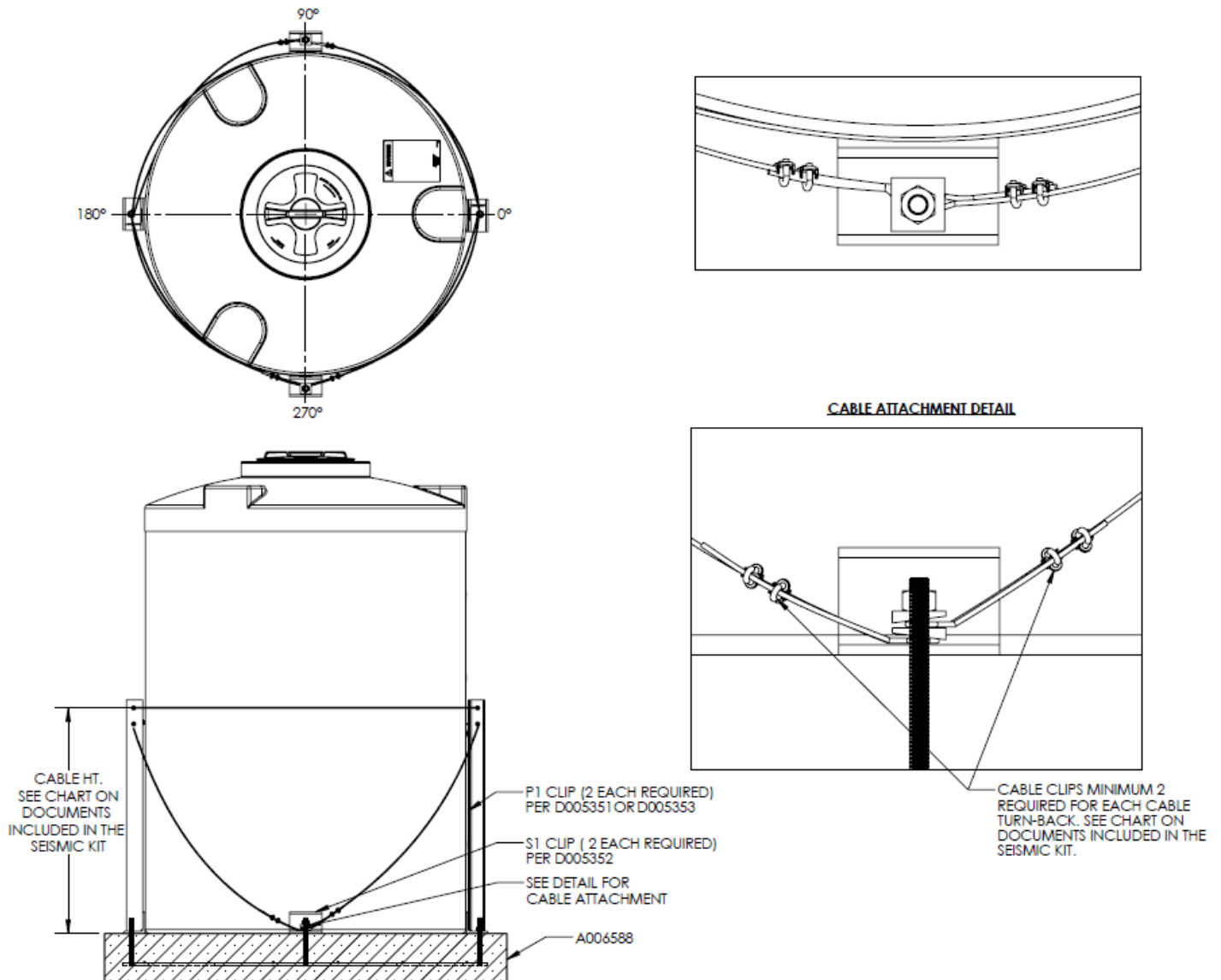


Figure 8.3

8.3.2 All construction shall meet local building code requirements and be approved by the building official. These guidelines have been provided to specify the restraint recommendations for Snyder Industries bulk storage tanks. The concrete shall have a minimum design as per drawing referenced in the specification chart above. Concrete pad design should be reviewed and approved by the building official based on specific application as other design parameters are possible depending upon site conditions.

8.3.3 All structural steel components shall be new and of basic open hearth process steel conforming to all applicable requirements of ASTM A36 (structural steel for bridges and buildings – $F_y = 36,000$ psi. All arc welding electrodes shall conform to ASTM A233 for steel arc welding electrodes. Electrodes shall be as recommended by the manufactures for the positions and other conditions of actual use. Welding shall conform to requirements of American Welding Society AWS 0121. All sharp edges and corners shall be removed on all structural steel components. Cables to be 7 X 19 stranded core construction sized per chart above. Material to be specified by customer order (minimum breaking strength equal to

or greater than 304 SS rating). Anchor bolts to be HILTI adhesive anchors, model HIT-RE 500-SD with size, material, and embedment as specified per specification chart above. Special inspection is required. All other fastener materials must correspond to the type of anchor selected.

8.4 STEEL LADDERS

8.4.1 Steel ladders are designed in accordance with OSHA 1910.27 and are to be mounted next to the tank on a concrete pad at the same elevation as the bottom of the tank. The concrete pad area that the ladder mounts to must be of sufficient size as to comply with OSHA standards regarding proper access to and from the ladder. This should be determined by the construction site engineer based on the specific application. The pad must be of sufficient size to allow proper attachment of 1/4" anchor bolts (check with anchor bolt manufacturer for embedment and edge distance required). The ladder mounting system is designed to allow for tank expansion and contraction due to temperature and loading changes. Using the assembly drawing and table shown in Figure 8.4, 8.4.1 verify that all parts are present and assemble accordingly.

NOTE: This ladder is provided for tank inspection only. At no time should the operator step off this ladder onto the tank unless stepping onto an approved work platform with guard rails or utilizing some other approved safety device. Proper safety equipment, (i.e. guard rails, safety harness, etc.) must be used to step onto the tank. Consult applicable regulations to determine proper equipment for other than inspection work.

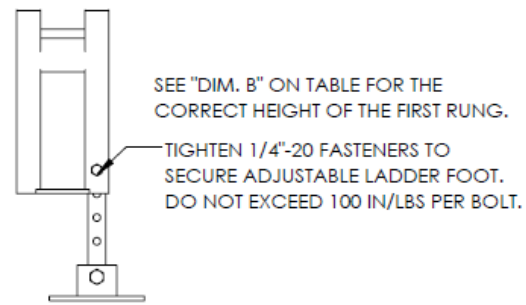
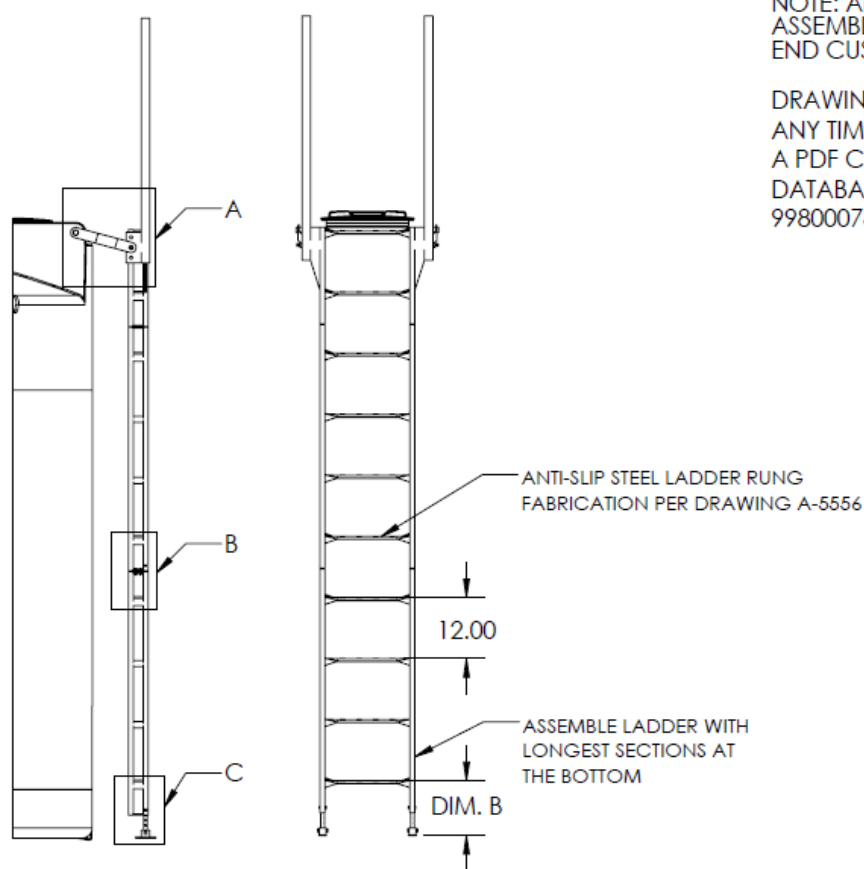
8.4.2 Attach the two pivoting attachment arms to the ladder using 1 ea. 1/2"-13 x 2" hex head bolt and 2 ea. 1/2" - 13 hex nuts. Double nut each bolt by tightening the first nut to 75 ft. - lbs. of torque and then jamming the second nut to the first nut by holding the first nut and tightening the second to 75 ft. - lbs. of torque. Position the ladder on the tank and attach the top pivoting attachment arms to the tank with the ladder attachment tube and cotter pin provided (see Figure 8.4). Position the ladder parallel with the side of the tank and mark the 1/4" anchor bolt locations. Install appropriate 1/4" anchor bolts and attach the bottom of the ladder to the concrete pad. Anchor bolts are not provided by the manufacturer and must be purchased by the customer.

8.5 STEEL LADDER CAGES

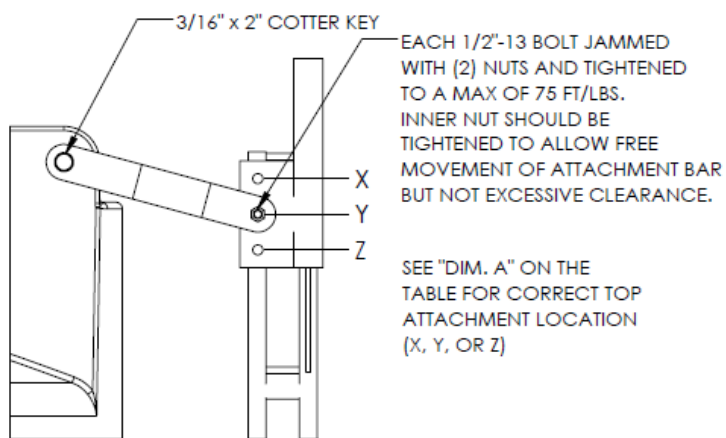
8.5.1 Using the assembly drawing shown in Figure 8.5 and the instructions in section 8.4.2, verify that all parts are present and assemble accordingly. These cages are designed for use only with the SII steel ladder design.

NOTE: Assembly is easier if the cages are installed on the ladder before the ladder installation to the tank.

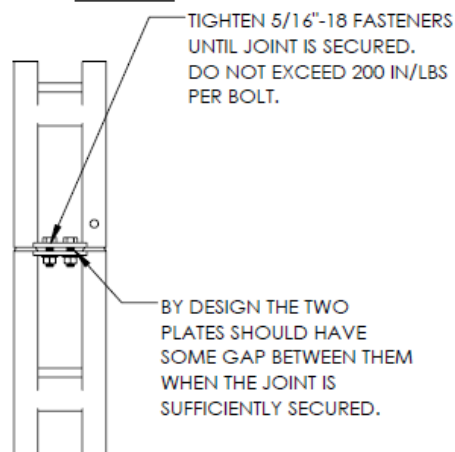
8.5.2 Install the cages loosely using the u-bolts provided starting with the top cage unit (4 ft. unit with a larger bolt pattern). The bottom cage unit must have a larger diameter at the bottom than at the top of the unit and the bottom edge of the unit be located a minimum of 7 feet and a maximum of 8 feet above the ground. When the cage units have been properly located and spaced evenly, tighten the u-bolts securely.



DETAIL C



DETAIL A



DETAIL B

Figure 8.4

MODULAR STEEL LADDER DESIGN TABLE						S:\REF FILES\EXCEL		
TANK SIZE	TANK P/N	LADDER SECTIONS REQUIRED				TOP ATTACHMENT (DIM A)	BOTTOM RUNG HEIGHT (DIM B)	ASM PN
		3 FT.	4 FT.	5 FT.	6 FT.			
2000 x 90	505xx			1		X	11	34701685
2000 x 96	50503			1		Z	10	34701685
2500 x 90	509xx	1	1			Y	8	34701674
2500 x 96	50903				1	Z	11	34701690
3000 x 90	513xx		2			X	11	34701671
3000 x 96	51303	1	1			Y	11	34701674
3000 x 102	741xx				1	Z	11	34701690
3900 x 90	519xx			1	1	X	11	34701687
4000 x 120	74211	1	1			Z	8	34701674
4100 x 102	736xx		1	1		Z	8	34701686
4100 x 120	82000				1	Y	11	34701690
4400 x 90	521xx		2	1		Y	9	34701675
4400 x 90 CB	52000					X	11	34701672
4500 X 102	742XX			2		Z	9	34701683
4600 x 120	70005		2			Z	8	34701671
4900 X 90	548XX			3		Z	8	34701689
5000 x 102	10021			1	1	Z	8	34701687
5500 x 90	702xx			2	1	Y	11	34701672
5500 x 120	700xx		1	1		Z	10	34701686
5600 x 142	525xx				1	Y	11	34701690
6000 x 102	743xx		2	1		X	11	34701675
6000 x 120	71403			2		Z	11	34701683
6200 x 120	822xx			2		Z	8	34701683
6500 x 120	714xx			1	1	Z	8	34701687
6600 x 120	53004			1	1	X	8	34701687
7000 x 142	530xx	1	1			Y	11	34701674
7500 x 102	744xx			1	2	Y	11	34701678
8000 x 120	53006		2	1		Y	11	34701675
8500 x 120	740xx		2		1	Z	11	34701670
8750 x 142	536xx		1	1		Z	9	34701686
9500 x 120	745xx		1		2	Z	8	34701672
10500 x 142 L&P	533xx				2	Z	11	34701677
10500 x 144 CH	53303		2		1	Z	8	34701675
11500CB x 142	744xx			1	2	Z	8	34701678
12500 x 142	535xx		2		1	Y	11	34701670
15000 x 142	537xx			1	2	Y	11	34701678
16500 x 142	538xx		1	3		Y	11	34701669
20000 x 165	303xx			1	2	Z	11	34701678
550CCS	50400	1				X	11	34701684
1100CCS	54700	1	1			Z	8	34701674
1550CCS	54900		1	1		Y	11	34701686
2000CCS	55700	1	1			Z	8	34701674
2500CCS	55800		2			Y	11	34701671
3000CCS	55900			2		Z	8	34701683
3500CCS	56000			1	1	Y	11	34701687
4000CCS	56100		2	1		Z	8	34701675
4500CCS	56200		2		1	X	11	34701670
5000CCS	56300			2	1	Z	9	34701672
5500CCS	56600				2	Y	11	34701677
6500CCS	56700		2		1	X	11	34701670
8700CCS	10064		2		1	X	11	34701670
10000CCS	10066			1	2	Z	8	34701678
12500CCS	10311	1			3	Z	8	34702464
1000DCT	5990102	1				X	11	34701684
1500DCT	5990302		1			Y	11	34702945

Figure 8.4.1

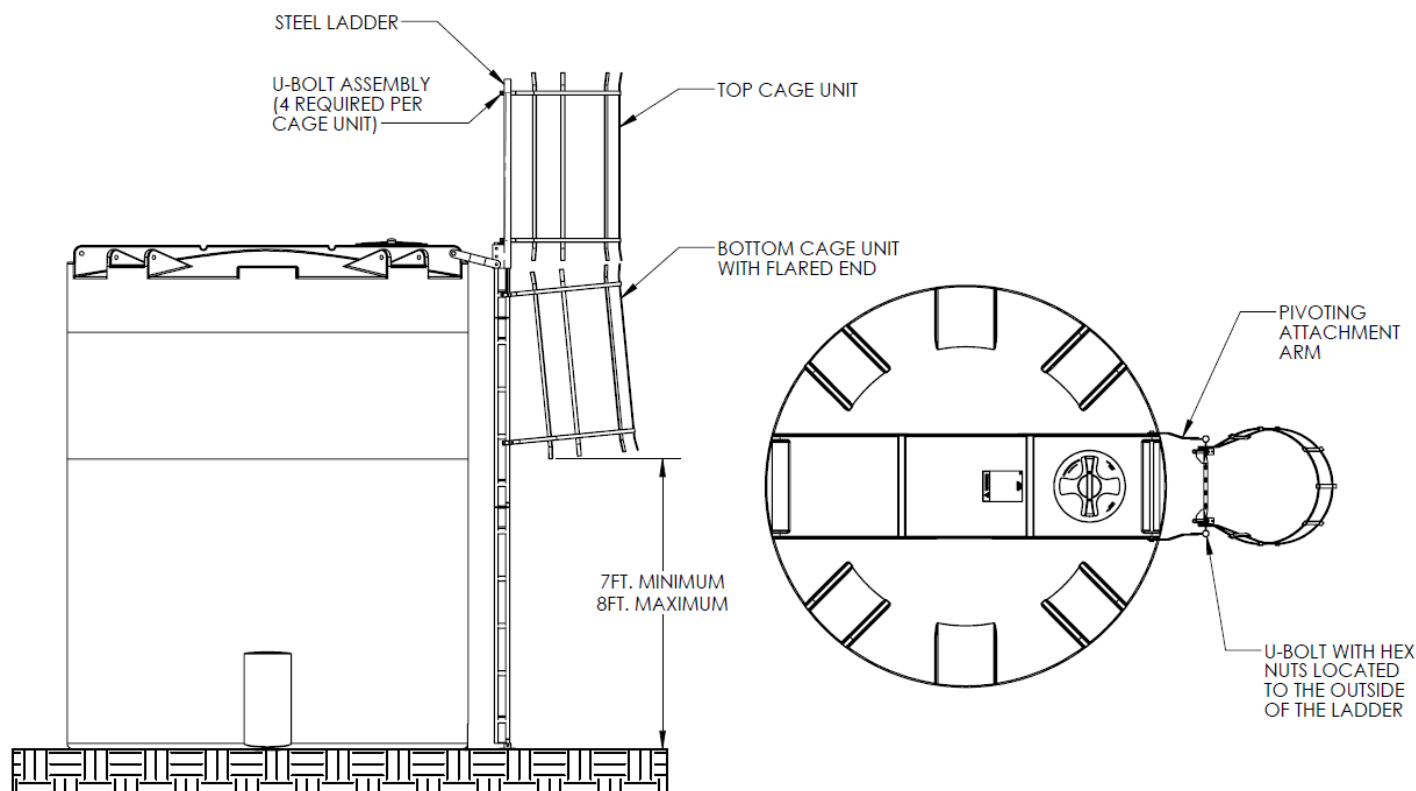


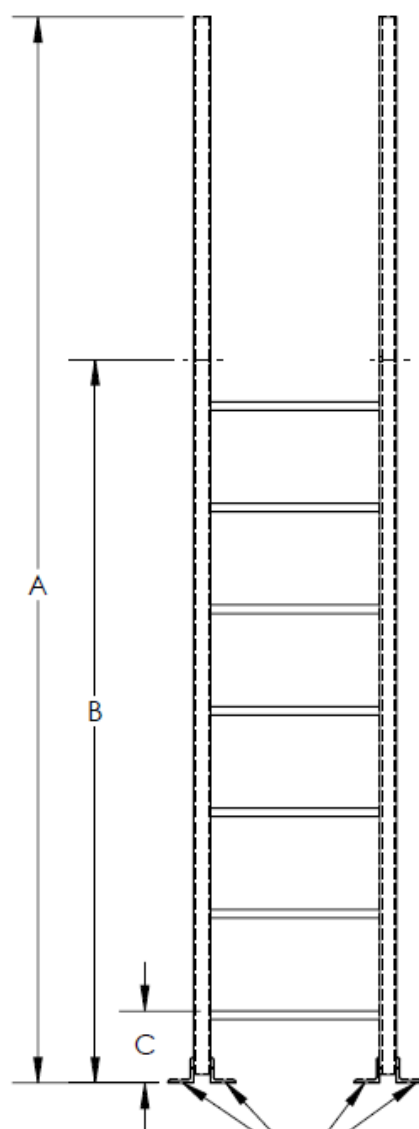
Figure 8.5

NOTE: This ladder is provided for tank inspection only. At no time should the operator step off this ladder onto the tank unless stepping onto an approved work platform with guard rails or utilizing some other approved safety device. Proper safety equipment (i.e. guard rails, safety harness, etc.) must be used to step onto the tank. Consult applicable regulations to determine proper safety equipment.

8.6 FRP LADDERS (up to 300" height)

8.6.1 FRP ladders are designed in accordance with OSHA 1910.27 and are to be mounted next to the tank on a concrete pad at the same elevation as the bottom of the tank. The concrete pad area that the ladder mounts to must be of sufficient size as to comply with OSHA standards regarding proper access to and from the ladder. This should be determined by the construction site engineer based on the specific application. The pad must be of sufficient size to allow proper attachment of 5/8" anchor bolts (check with anchor bolt manufacture for embedment and edge distance required). The ladder mounting system is designed to allow for tank expansion and contraction due to temperature and loading changes. Using the assembly drawing and table shown in Figure 8.6, verify that all parts are present and assemble accordingly.

8.6.2 Attach the stainless steel top pivoting attachment arms to the ladder using the 1/2" bolt and 3/4" bushing assemblies (2 required) as shown in Figure 8.7. Position the ladder on the tank and attach the top pivoting attachment arms to the tank with the ladder attachment tube and cotter keys provided (see assembly drawing). Position the ladder parallel with the side of the tank and mark 4 ea. 5/8" anchor bolt locations. Install appropriate 5/8" anchor bolts and attach the bottom of the ladder to the concrete pad. Anchor bolts are not provided by the manufacturer and must be purchased by the customer.



FRP LADDER ANCHOR
BOLT MOUNTING CLIPS

TANK SIZE	TANK P/N	A	B	C
1100 X 64	183XXX	126.0	85.5	12
1550 X 64	184XXX	162.0	118.0	12
2000 X 90	505XXX	126.0	85.5	8
2000 X 96	50503X	124.0	77.5	12
2500 X 90	509XXX	145.0	105.0	7
3000 X 90	513XXX	166.0	122.0	4
3000 X 90CB	515000	208.0	164.0	10
3000 X 96	H741XX	150.0	106.0	12
3000 X 102	741XXX	137.0	93.0	11
3900 X 90	519XXX	202.0	158.0	4
4100 X 102	736XXX	169.0	124.0	7
4300 X 102	H74201	138.0	97.0	12
4400 X 90	521XXX	219.0	178.0	9
4400CB X 90	520000	258.0	215.0	12
4400 X 120	820XXX	138.0	97.0	12
4500 X 102	742XXX	182.0	138.0	8
4600 X 120	70005	156.0	112.0	6
4900 X 90	548XXX	238.0	197.0	4
5000 X 102	10021XX	194.0	149.0	8
5500 X 90	702XXX	258.0	214.0	12
5500CB X 90	7040000	292.0	251.0	10
5500 X 120	700XXX	160.0	120.0	9
5600 X 142	525XXX	126.0	87.0	12
6000 X 102	743XXX	227.0	183.0	5
6500CB X 90	718XXX	330.0	289.0	12
6500 X 120	714XXX	181.0	140.0	6
6600 X 120	53004	198.0	154.0	12
7000 X 142	530XXX	147.0	106.0	12
7500 X 102	744XXX	270.0	226.0	12
8000 X 120	53006	222.0	121.0	12
8000 X 142	53203	182.0	138.0	8
8500 X 120	740XXX	233.0	188.0	11
8750 X 142	536XXX	170.0	130.0	12
9500 X 120	745XXX	254.0	209.0	8
10500 X 142	533XXX	193.0	152.0	10
10500 X 142.5	53303X	217.0	173.0	12
11500CB X 142	53401XX	274.0	228.0	4
12500 X 142	535XXX	222.0	181.0	12
15000 X 142	537XXX	258.0	217.0	12
16500 X 142	538XXX	294.0	249.0	12

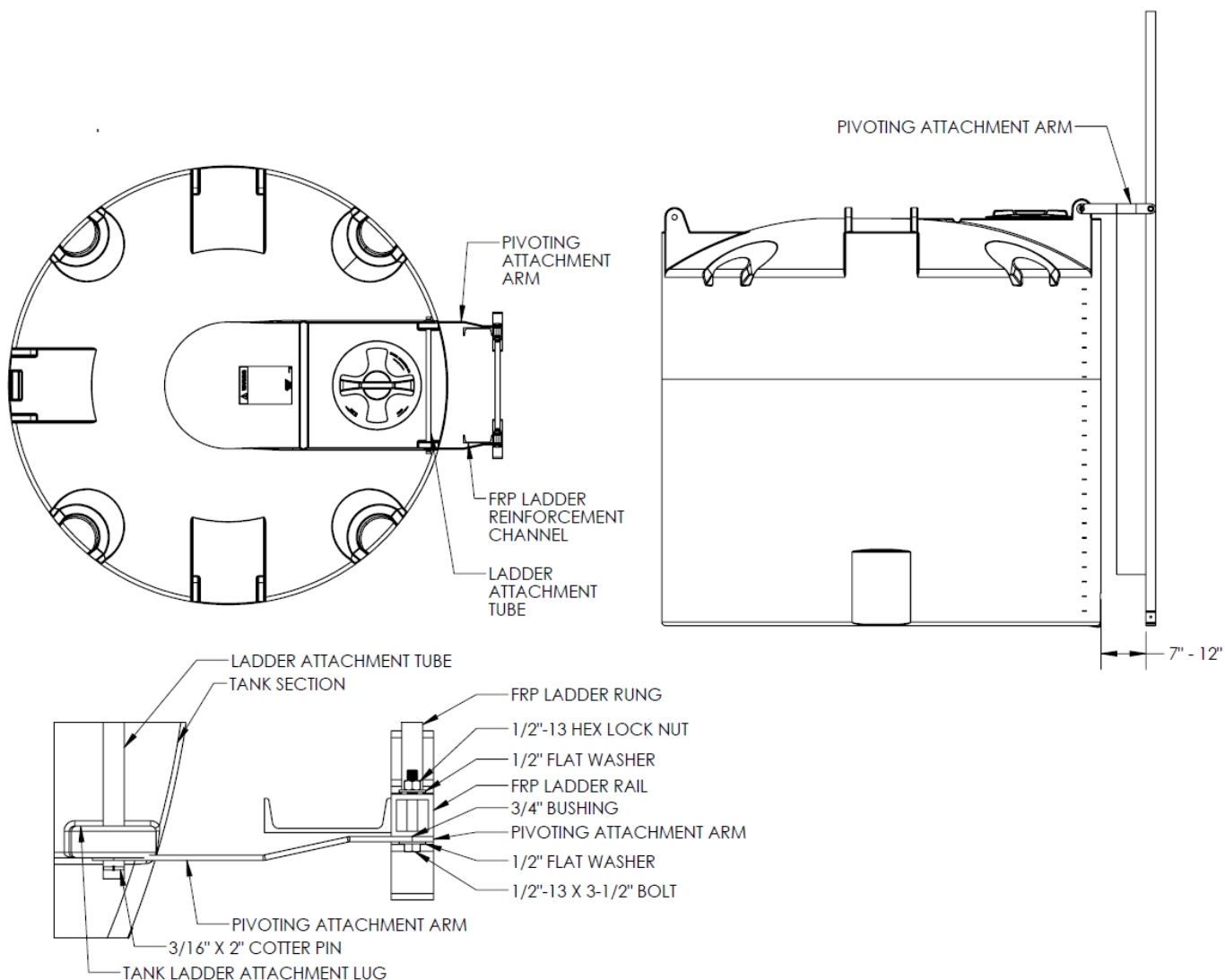


Figure 8.6

8.7 FRP LADDER CAGES

8.7.1 Using the assembly drawing shown in Figure 8.7 and the instructions in section 8.6.2, verify that the correct number of fasteners have been shipped to attach the FRP cage unit. These cages are designed for use only with the SII FRP ladder design.

NOTE: Assembly is easier if the cage unit is installed on the ladder before ladder installation.

8.7.2 Position the cage unit on the ladder with the flared end toward the ladder base. Attach the cage to the ladder using the 3/8" stainless steel bolts provided (4 bolt assemblies per cage hoop).

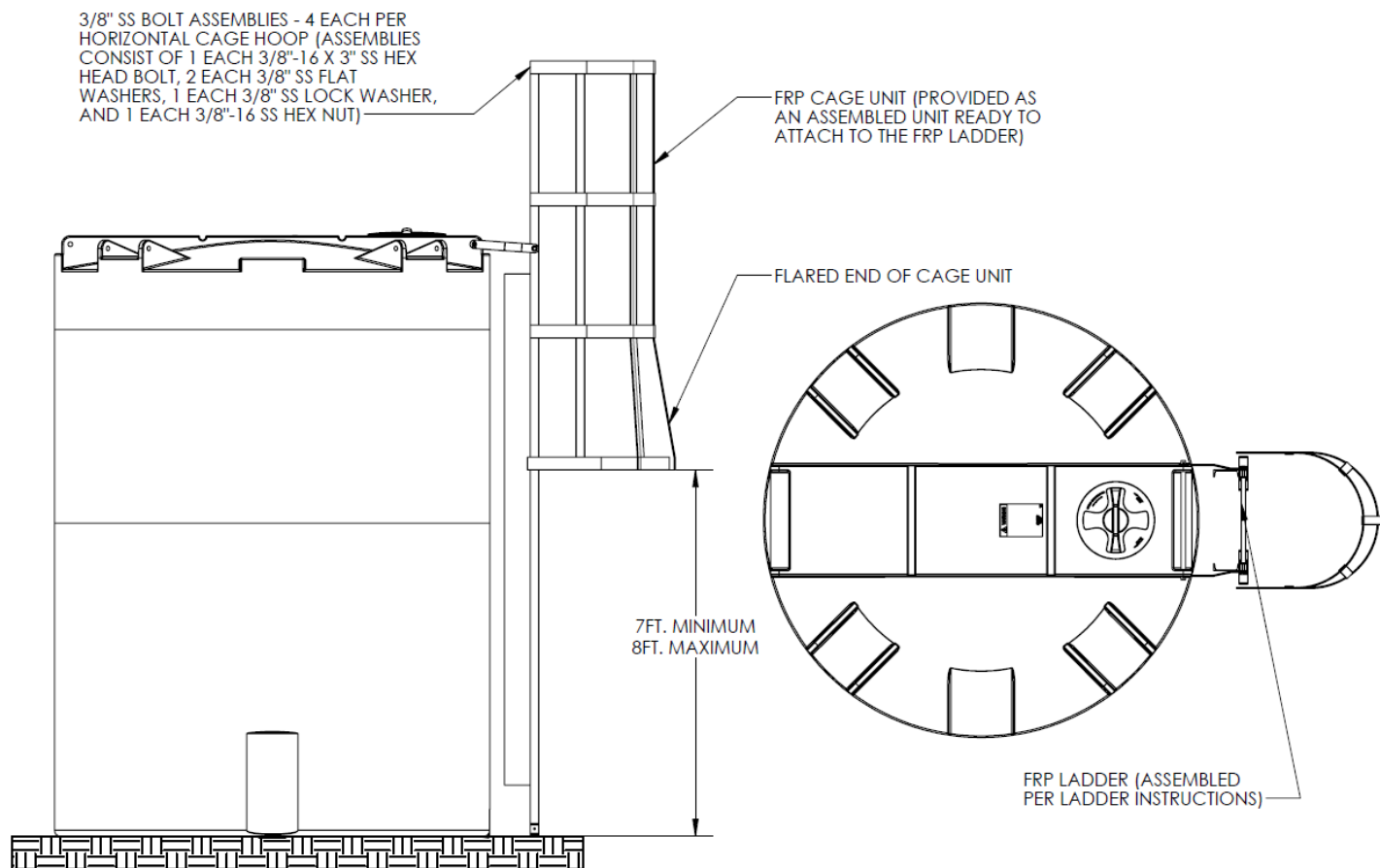


Figure 8.7

8.8 HORIZONTAL LEG TANK INSTALLATION

8.8.1 Horizontal leg tanks are to be used only with adequate support. The hoop pipe restraints restrain the leg tank and give it structural support. Hoop restraints are available for tanks 525 gallons and larger. Hoops are required on tank sizes above 730 gallons. An example assembly drawing is shown in Figure 8.8.

8.8.2 With one person on each side of the tank, insert J-bolts into the hoop holes and lift the hoop into position directly above the tank legs. Spread the hoop slightly while sliding the hoop (centered in the pipe guide channel formed into the tank legs) onto the tank. Install the bevel washer, lock washer, and hex nut on each of the J-bolts loosely. Do not tighten the hex nuts yet. See view A-A shown in Figure 8.8 for an illustration of the loosely assembled J-bolt/hoop assembly.

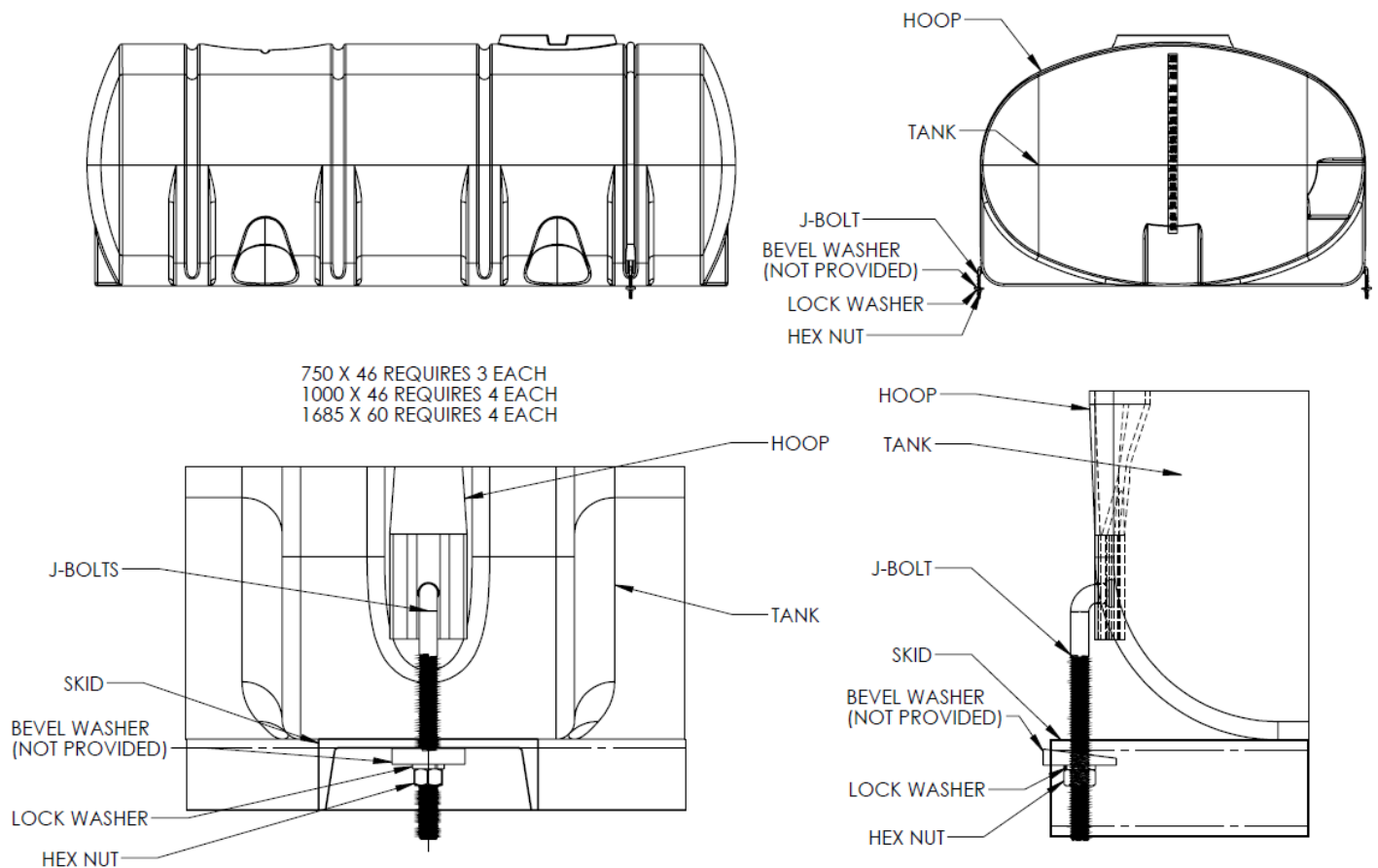


Figure 8.8

8.8.4 Repeat the procedure as detailed in section 8.8.2 for each of the remaining hoops required. When all hoops have been loosely installed, check the tank and hoop alignment to make sure the placement is correct. When proper alignment has been established, start tightening the hex nuts on each hoop. Tighten both sides of the hoop equally until the top of the hoop is tight all the way around the top of the tank and proper tension is obtained. Proceed to the next hoop and repeat the tightening procedure until all of the hoops have proper tension. Recheck the hoop tension after the tank has been filled. Tighten the hoops as necessary until the top of the hoop is tight all the way around the top of the tank.

8.8.5 Additional baffling may be required on horizontal tanks over 1000 gallons if the tank is used to haul liquid over the road. The additional baffling is used to reduce sloshing during transports (starting and stopping).

8.9 HEATED TANKS

8.9.1 Heated tanks are insulated with a minimum of 2" of 2-3 lb./ft.³ polyurethane foam material with an "R" value of 6.3/in. The insulation is sealed with 2 coats of acrylic latex mastic. Although this appears to be a tough, resilient covering, it can be easily torn or broken if the tank is not properly transported. **Use only carpeted and padded equipment to move an insulated tank.** Do not allow the tank to drop or roll on rough surface as this may damage the insulation.

8.9.2 Heated tanks are equipped with at least 1 control box with process temperature and high limit temperature settings. The maintenance temperature setting should be set at the desired maintenance temperature. The over-limit temperature setting should be adjusted to a minimum of 100°F. The maximum temperature the over-limit control should be set to is 140° F for crosslinked polyethylene tanks and 130° F for high density linear polyethylene tanks. Be sure to check tank material type and design before setting any control temperatures over 100° F. It is best to keep the tank at the lowest temperature necessary to accomplish the desired objective.

Ref Guide <https://www.snydernetwork.com/Industrial-PDF/technical/guidelines-for-use/2xtc.pdf>

Manual <http://www.snydernetwork.com/Industrial-PDF/technical/guidelines-for-use/2xtc-manual.pdf>

8.9.3 Minimum Precipitation/Liquid Exposure: Tanks should be positioned in a manner that minimizes direct exposure to precipitation and standing water within the dike. This can be achieved through appropriate site preparation, such as ensuring adequate drainage and implementing measures to prevent water accumulation around the tank perimeter.

Protective Measures: Additional protective measures, such as the use of impermeable barriers or elevated platforms, should be considered to prevent moisture ingress from the ground and safeguard the integrity of the tank's insulation.

Regular Inspection and Maintenance: Routine inspections should be conducted to assess the condition of the tank's insulation and heat trace system, with particular attention to areas susceptible to moisture ingress. Any signs of damage or deterioration should be promptly addressed through repair or replacement to prevent potential hazards.

9. TANK MAINTENANCE

9.1 TANK INSPECTION

9.1.1 Simple periodic inspections of the tank installation can prevent problems and chemical loss from occurring. Inspection intervals should be consistent with site usage (the more times liquid is processed through the tank site, the more frequent the inspections). Prior to any inspection the tank needs to be emptied and cleaned. This inspection should occur annually at a minimum. The checking procedure should be as follows:

1. Inspect the tank for physical damage such as cuts, impacts, cracks, swelling, softening of tank walls, and stress cracks (caused by long term exposure to environmental conditions and stress). NOTE: A tank inspection guide is available on the SII website at the following address: www.snydernet.com or can be obtained for tank analysis and inspection through the Customer Service Department at SII.
2. Inspect the fittings for broken parts, cracks, wear marks, or other signs of potential leaks.
3. Inspect gaskets for deterioration. Look for discoloration, bulges, checking or crazing. All of these symptoms could indicate potential failure.
4. Inspect any valves and/or pumps that may be connected to the tank. Also inspect the hoses and connections for any signs of wear.

10. SII PRODUCT POLICY STATEMENTS

10.1 SII STANDARD LIMITED WARRANTY

10.1.1 Distributors and their authorized distribution have the responsibility of calling to the attention of their customers the following Snyder Industries, Inc. standard limited warranty, prior to acceptance of an order from the customer for any Snyder Industries, Inc. product. Record all required warranty information in section 2.1 and retain this information for use in the advent of a warranty question.

10.1.2 Snyder Industries, Inc. warrants to the purchaser for use that if any manufactured tank product is proven to be defective in material or workmanship within 3 YEARS from the date of original invoice from factory, and Snyder Industries, Inc. is notified within 15 days after such defect is discovered, Snyder Industries, Inc. will (at company option) either replace or repair said part. Snyder Industries, Inc. warrants to the purchaser for use that if any tank fitting, attachment, or accessory product is proven to be defective in material or workmanship within 1 YEAR from the date of original invoice from factory, and Snyder Industries, Inc. is notified within 15 days after such defect is discovered, Snyder Industries, Inc. will (at company option) either replace or repair said part. This Snyder Industries Standard Limited Warranty does not apply to damage resulting from misuse, improper application of recommended materials, neglect, material wear, accident, or improper installation or maintenance. Said part will not be considered defective if it substantially fulfills performance specifications. THE FOREGOING STANDARD LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESSED OR IMPLIED. Snyder Industries, Inc. neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said tank product and will not be liable for incidental or consequential damages. THE REMEDIES STATED HEREIN SHALL BE THE EXCLUSIVE REMEDIES AVAILABLE UNDER THIS STANDARD WARRANTY. CLAIMS UNDER THIS STANDARD LIMITED WARRANTY SHALL BE HANDLED UNDER THE SNYDER INDUSTRIES, INC. SERVICE POLICY. Snyder Industries, Inc. will not be responsible for any charges incurred in repair-

ing or servicing any Snyder Industries, Inc. product except as such repairs are made at Snyder Industries, Inc. or by Snyder Industries, Inc. personnel or as approved in writing from Snyder Industries, Inc. Customer Service.

10.2 SII WARRANTY EXCEPTIONS

10.2.1 Distributors and their authorized distribution have the responsibility of calling to the attention of their customers any exceptions to the Snyder Industries, Inc. standard limited warranty, prior to acceptance of an order from the customer for any Snyder Industries, Inc. product.

10.2.2 Due to the uniqueness of tank applications, Snyder Industries, Inc. may offer warranties other than the standard warranty. These warranty statements will be in writing from Snyder Industries, Inc. The warranty period may be longer than 3 years as in the case for purchased extended warranties, or the warranty period may be shorter than 3 years as in the case for certain chemical/material applications. Please consult Snyder Industries, Inc. if you have any questions regarding warranty coverage and/or requirements.

10.3 RETURN MERCHANDISE/WARRANTY CLAIM PROCEDURE

10.3.1 Snyder does not accept returns without prior written authorization. Returns after 60 days from date of shipment from Snyder's plant will not be accepted. Items that are used, worn, or damaged will not be accepted for refund or credit. Orders that are customized (have fittings installed or modifications/color that are not standard) are non-refundable AND MAY NOT BE CANCELLED once manufactured – even if not yet shipped. Items that are authorized by Snyder for return will be issued an RGA (Return Goods Authorization) number and are subject to a 25% restock fee unless product is determined by Snyder to be defective or if it was shipped incorrectly. Any attempt to return a product without the RGA number will not be credited and the shipment may be refused. Items returned must be returned freight prepaid and freight from original shipment is not refundable.

Snyder Industries, Inc.
6940 O Street, Suite #200
Lincoln, NE 68510
(402) 467-5221
FAX: (402) 467-6493
E-mail: sales@snydernet.com

The following information will be required to assist in filing your claim:

1. Product identification (tank size, part number, serial number, etc.)
2. SII customer order number
3. Name and phone number of person making the claim
4. Distributor/company name, address, and phone number
5. Description of reason for claim
6. Pictures of failure and installation
7. MSDS of chemicals stored
8. Temperature of tank application

