



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

State of West Virginia
 Request for Quotation
 27 - Miscellaneous

Proc Folder: 236801

Doc Description: BRINE DISPENSING SYSTEM

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2016-08-09	2016-09-06 13:30:00	CRFQ 0803 DOT1700000008	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number:

GVM, Inc
 224 EAST KING STREET
 EAST BERLIN, PA. 17316
 800-458-5123

08/29/16 10:02:39
 WV Purchasing Division

FOR INFORMATION CONTACT THE BUYER

Misty DeLong
 (304) 558-8802
 misty.m.delong@wv.gov

Signature X

FEIN# 23-2065809

DATE 8/31/2016

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

ADDITIONAL INFORMATION:

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways to establish an open-end contract to provide Brine Dispensing Systems for use at locations throughout the State by the West Virginia Division of Highways.

INVOICE TO		SHIP TO	
VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City	WV99999	No City	WV 99999
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	BRINE DISPENSING SYSTEM	10.00000	EA	\$6885.00	\$68,850.00

Comm Code	Manufacturer	Specification	Model #
48111002	GVM, Inc.	OVERHEAD Spray System with Remote Control	CP-50-RC

Extended Description :
BRINE DISPENSING SYSTEM

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Technical Questions Due	2016-08-19

DOT1700000008	Document Phase Final	Document Description BRINE DISPENSING SYSTEM	Page 3 of 3
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

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. PREBID MEETING: The item identified below shall apply to this Solicitation.

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

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

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 person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify 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.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. 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.

All Vendors should arrive prior to the starting time for the pre-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.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. 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 in order 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 nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: August 19, 2016

Submit Questions to: Misty Delong
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
Email: Misty.M.Delong@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 electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. 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. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
BUYER: Misty DeLong
SOLICITATION NO.: CRFQ DOT1700000008
BID OPENING DATE: September 6, 2016
BID OPENING TIME: 1:30 PM, EST.
FAX NUMBER:

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. Submission of a response to an Expression of Interest or Request for Proposal is not permitted in wvOASIS.

For Request For Proposal ("RFP") Responses Only: In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus NA convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

- Technical
 Cost

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).

Bid Opening Date and Time: September 6, 2016 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 Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

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. ALTERNATES: 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 should 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.

11. 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.

12. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, 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.

13. 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.

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

15. PREFERENCE: Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) 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. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. 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 § 148-1-4.6.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately opened and/or 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 if those documents are required with the bid.

19. 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.”

20. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

21. 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.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid 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: This Contract becomes effective on Award and extends for a period of One (1) year(s).

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 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. Renewal of this Contract is limited to Two (2) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed 24 months in total. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

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, the vendor agrees that maintenance, monitoring, or warranty services will be provided for one year thereafter with an additional _____ successive one year renewal periods or multiple renewal periods of less than one year provided that the multiple renewal periods do not exceed _____ months in total. Automatic renewal of this Contract is prohibited.

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.

Other: See attached.

4. NOTICE TO PROCEED: Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

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 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.

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 of 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 below must be provided to the Purchasing Division by the Vendor as specified below.

BID BOND (Construction Only): Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

PERFORMANCE BOND: The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

LABOR/MATERIAL PAYMENT BOND: The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award. In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable.

MAINTENANCE BOND: The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

INSURANCE: The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

Commercial General Liability Insurance: In the amount of \$1,000,000.00
or more.

Builders Risk Insurance: In an amount equal to 100% of the amount of the Contract.

The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

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

8. WORKERS' COMPENSATION INSURANCE: The apparent successful 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.

9. LITIGATION BOND: The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or \$5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

10. LIQUIDATED DAMAGES: Vendor shall pay liquidated damages in the amount of

for _____

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.

11. 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.

12. 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.

13. PAYMENT: Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

14. PURCHASING CARD ACCEPTANCE: The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

15. 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.

16. 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 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.

17. 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.

18. 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 § 148-1-6.1.e.

19. TIME: Time is of the essence with regard to all matters of time and performance in this Contract.

20. 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.

21. COMPLIANCE: 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.

22. 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.

23. 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.

24. 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.

25. 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.

26. 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. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

27. 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.

28. 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.

29. BANKRUPTCY: In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

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 <http://www.state.wv.us/admin/purchase/privacy/default.html>.

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. 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.

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 CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) 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; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall 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. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

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. PURCHASING AFFIDAVIT: In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of \$1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.

38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE: This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. 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.

40. 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.requisitions@wv.gov.

41. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. 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.

42. 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. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. 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
- d. 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.

43. 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.

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.

Thomas Bair Vice President
(Name, Title)
THOMAS BAIR VICE PRESIDENT
(Printed Name and Title)
224 EAST KING ST. EAST BERLIN, PA. 17316
(Address)
800-458-5123 // 717-259-1588
(Phone Number) / (Fax Number)
TLB@GVMINC.COM
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation 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 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 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.

GVM, Inc.
(Company)

Thomas Bair Vice President
(Authorized Signature) (Representative Name, Title)

THOMAS BAIR VICE PRESIDENT
(Printed Name and Title of Authorized Representative)

8/31/2016
(Date)

800-458-5123 // 717-259-1588
(Phone Number) (Fax Number)

REQUEST FOR QUOTATION
Brine Dispensing System

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways to establish an open-end contract to provide Brine Dispensing Systems for use at locations throughout the State by the West Virginia Division of Highways.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
 - 2.1 **“Contract Item” or “Contract Items”** means the list of items identified in Section 3.1 below and on the Pricing Pages.
 - 2.2 **“Pricing Pages”** means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A and used to evaluate the Solicitation responses.
 - 2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
 - 2.4 **“WVDOH”** used through this Solicitation means the West Virginia Division of Highways.
 - 2.5 **“ASTM”** used throughout this Solicitation means the American Society for Testing and Materials, reference: www.astm.org.
 - 2.6 **“Contractor” or “Vendor”** used throughout this Solicitation and in any cited sections of the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, most recent edition, as modified by all subsequent annual Supplemental Specifications, are interchangeable.

3. **GENERAL REQUIREMENTS:**
 - 3.1 **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.
 - 3.1.1 A liquid deicer dispensing system. The unit shall be used to pre-wet solid deicing materials by the truckload or front end loader bucket. The dispensing system shall also be capable of filling stationary or portable liquid storage tanks.

REQUEST FOR QUOTATION
Brine Dispensing System

Overall System:

- All components in direct contact with the liquids being dispensed shall be rated for chemical/chloride resistant applications.
- All fabricated steel components including base, main body and spray arm of the unit shall be hot dip galvanized, in accordance with ASTM A123, for corrosion protection.
- Dimensions shall be: the spray arm support post height shall be 10'-4" minimum above finished grade, spray arm height (horizontal position) shall be 9'-4", spray head distance from pivot shall be 8'-6" and support base shall be 3'-0"W x 3'-0"L x 3 ½"H maximum.
- Hinges and latches shall be stainless steel.
- All electrical controls shall be mounted in a fiberglass NEMA 4X weather tight enclosure with hinged cover for easy access and lockable latch.
- The assembly shall have a support base that is self-supporting and free-standing.
- The Primary System components shall include the following items:

3.1.1.1 Overhead Spray Head Assembly:

- The overhead spray function shall be controlled either manually at the control panel or by Vendor supplied remote control transmitter.
- The spray head shall be made of 1 ½" diameter schedule 80 PVC pipe with four 1" diameter brass spray nozzles spaced at 15" intervals.

3.1.1.2 Spray Arm:

- The vertical movement of the spray arm shall be accomplished manually by a hand winch rated at 800 pounds minimum, mounted at an appropriate height above finished grade for operation.

3.1.1.3 System Control Panel:

- The system control panel shall have:
 - a) a power disconnect switch
 - b) a selection switch for manual or automatic dispensing, with remote transmitter
 - c) run/stop button(s)

REQUEST FOR QUOTATION
Brine Dispensing System

- The interior of the box shall contain a magnetic motor starter with thermal overload reset, terminal strip, relays, timers, transformers, remote control circuit board and a power disconnect switch.
- The electrical control panel shall be mounted to the main body of the spray arm support post.
- Electrical service (220 volt, 20 amp single phase) connection to the electrical control panel will be supplied by the WVDOH. When a Delivery Order is issued to the Vendor, the Vendor shall advise the WVDOH of materials that will be needed to establish hook up well in advance of installation and shall provide technical assistance to the WVDOH for electrical hook up and calibration when the system is installed.

3.1.1.4 Dispensing Tank and Pump:

- The unit shall have a stainless steel centrifugal pump with a 2" diameter inlet, a 1 ½" diameter outlet and a rated flow of 60 gpm.
- The pump shall be closely located to a 2 HP, 3450 rpm, TEFC, 208-230 volt single phase motor equipped with a stainless steel shaft.
- The pump motor assembly shall be housed for protection in a rotationally molded, UV stabilized polyethylene enclosure.
- Electrical wiring from the pump motor to the electrical box shall be contained in liquid tight flexible conduit with liquid tight connectors at both ends.
- The pump control timer shall have multiple settings which enables calibrations of various application rates.
- A 2" diameter stainless steel tank shut-off valve shall be installed at the tank outlet and up to a maximum 30 feet of 2" diameter chloride resistant flexible PVC hose with fittings shall be installed from the tank to the pump.
- An electric ball valve shall be installed to prevent siphoning through the system.
- The electric ball valve will automatically open when the pump system is activated and will close when the pump shuts off.

3.1.1.5 Connection Hoses and Fittings:

- Manifold style fittings shall be used for connections to facilitate repair and maintenance.

REQUEST FOR QUOTATION
Brine Dispensing System

- The truck load and unload hoses are to be 1” diameter chloride resistant rubber, 25 feet in length with 1” diameter polypropylene valves and quick couple connectors.
- Two polypropylene three-way valves shall be included to allow for directional flow to the overhead spray system or the truck load / unload hoses.
- All hose clamps used are to be stainless steel.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price for a liquid deicing dispenser system. The Contract shall be awarded to the Vendor that provides the system meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.2 Pricing Pages: Vendor should complete the Pricing Page by providing the Unit Cost per each Brine Dispensing System. Vendor shall bid one price statewide to be delivered to any District in the state. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor’s bids being disqualified.

Vendor should provide any documentation/product brochures regarding the Brine Dispensing System proposed, with their bid. A sample Operations and Maintenance Manual should be submitted with the Vendor’s bid. A sample parts listing and/or working parts diagram should be submitted with the Vendor’s bid.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. 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 should type or electronically enter the information into the Pricing Pages Spreadsheet to prevent errors in the evaluation. In most cases, the Vendor can request an electronic copy of the Pricing Pages/E-Catalog Spreadsheet for bid purposes by sending an email request to the following address:
misty.m.delong@wv.gov.

5. ORDERING AND PAYMENT:

5.1 Ordering: Vendor shall accept orders through wvOASIS, regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a

REQUEST FOR QUOTATION
Brine Dispensing System

brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

- 5.2 Payment:** 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, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract.

6. DELIVERY AND RETURN:

- 6.1 Delivery Time:** Vendor shall deliver standard orders within 30 working days after orders are received. Vendor shall deliver emergency orders within an agreed upon established date between the WVDOH and the Vendor 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.

6.1.1 Included with the delivery of a Brine Dispensing System to a District, the Vendor shall provide an Operations and Maintenance Manual including a parts listing and/or working parts diagram pertinent to the System delivered.

- 6.2 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 a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

- 6.3 Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.
- 6.4 Return of Unacceptable Items:** 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 make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit

REQUEST FOR QUOTATION
Brine Dispensing System

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 purchase price, at the Agency's discretion.

- 6.5 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.

8. MISCELLANEOUS:

REQUEST FOR QUOTATION
Brine Dispensing System

- 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 Reports:** Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.
- 8.4 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: Thomas Bair
Telephone Numbers: 800-458-5123
Fax Number: 717-259-1588
Email Address: TLB@GVM.Inc.Com



PARTS & MAINTENANCE MANUAL

CALCOTE PEDESTAL



MODEL CP-50-RC



Manufacturers of Liquid Dispensing Systems

GVM Inc.
224 East King Street Suite 102
East Berlin, PA 17316
Phone: 800-458-5123
Fax: 717-259-1588

Table of Contents

Foreword.....	i
Warranty Information.....	ii
Section 1 – Safety.....	1
Common Safety Hazards.....	1.1
Section 2 – Parts and Operation.....	2
Calcote Pedestal.....	2.1
Stand and Hardware.....	2.2
Pump and Plumbing.....	2.3
Pump Information.....	2.4
Spray Bar Mounting.....	2.5
Spray Bar Assembly.....	2.6
Spray Bar Display.....	2.7
Tank Plumbing.....	2.8
Single Tank Plumbing.....	2.9
Double Tank Plumbing.....	2.10
Winch Assembly.....	2.11
Winch Information.....	2.12
Section 3 – Electrical.....	3
Electric Ball Valve.....	3.1
Electrical Controls.....	3.2
Night Light.....	3.3
Section 4 – Service and Maintenance.....	4
Maintenance Recommendations.....	4.1
Operator's Notes and Memos.....	4.2

Foreword

This manual has been prepared for the Owners and Operators of the GVM Inc. CP-50-RC. Read this manual carefully and become familiar with all instruments and controls. Learn the safest operating and maintenance techniques for the CP-50-RC.

This manual is part of your CP-50-RC. Keep this manual in a vehicle that is used to operate the CP-50-RC at all times, as a ready reference for anyone who may operate the CP-50-RC. If this manual is damaged or lost, a replacement manual may be purchased from your local GVM Inc. dealer.

As you would with all quality equipment, keep your CP-50-RC in good working order. This manual provides essential information for proper service and periodic maintenance

WARRANTY

SYSTEM WARRANTY

GVM Snow Equipment warrants, to the original purchaser, that if any part of the product proves to be defective in the workmanship or material within one (1) year, limited, from the date of purchase, and is returned to us within 30 days of the discovered defect, we will (at our option) repair or replace the defective part. This warranty does not apply to damage resulting from misuse, neglect, accident, or improper system installation. It also does not include normal operational wear or damage resulting from lack of preventive maintenance. This warranty is exclusive and supersedes all other warranties, whether expressed or implied.

GVM Snow Equipment neither assumes, nor authorizes anyone else to assume for it, any other obligation or liability in connection with this warranty and will not be liable for consequential damages.

All purchased components are warranted by their manufacturer and not by **GVM Snow Equipment**. The manufacturer's warranty will apply to these parts.

Electrical and hydraulic components are not to be disassembled without the express written consent of **GVM Snow Equipment**. Use of replacement parts other than the original equipment voids this warranty.

All returns and warranty claims must have a prior written approval of **GVM Snow Equipment**.

Section 1 – Safety

Section 1 – Safety.....	1
Common Safety Hazards.....	1.1

SECTION 1 – SAFETY

1.1 - Common CP-50-RC Safety Warnings

- Always read labels before using chemicals. Follow instructions from chemical manufacturers on how to select use, and handle each chemical. Note precautionary information each time before opening container.
- Do not spill chemicals or spray solutions on skin or clothing. If chemicals are spilled, remove contaminated clothing immediately and wash skin and clothing thoroughly. Follow instructions on the product label regarding contact and treatment.
- Avoid inhaling chemicals or spray solutions. When directed on the label, wear protective clothing and masks.
- Never smoke when handling chemicals.
- Wear protective gloves when handling chemicals and wash hands and face regularly.
- Store chemicals out of reach of children, pets, and unqualified people. Store chemicals outside of the home, under lock and key.
- Know the chemicals that are being used. Mixing unknown chemicals may create volatile and dangerous fumes and mixtures.
- Always dispose of empty containers according to directions.
- Comply with all federal, state, and local laws when operating.



Follow safety warnings at all times.

GVM Inc. makes every effort to ensure maximum safety. However, a careful study and thorough understanding of this manual and the unit is essential for the safe handling and correct operation of the CP-50-RC.

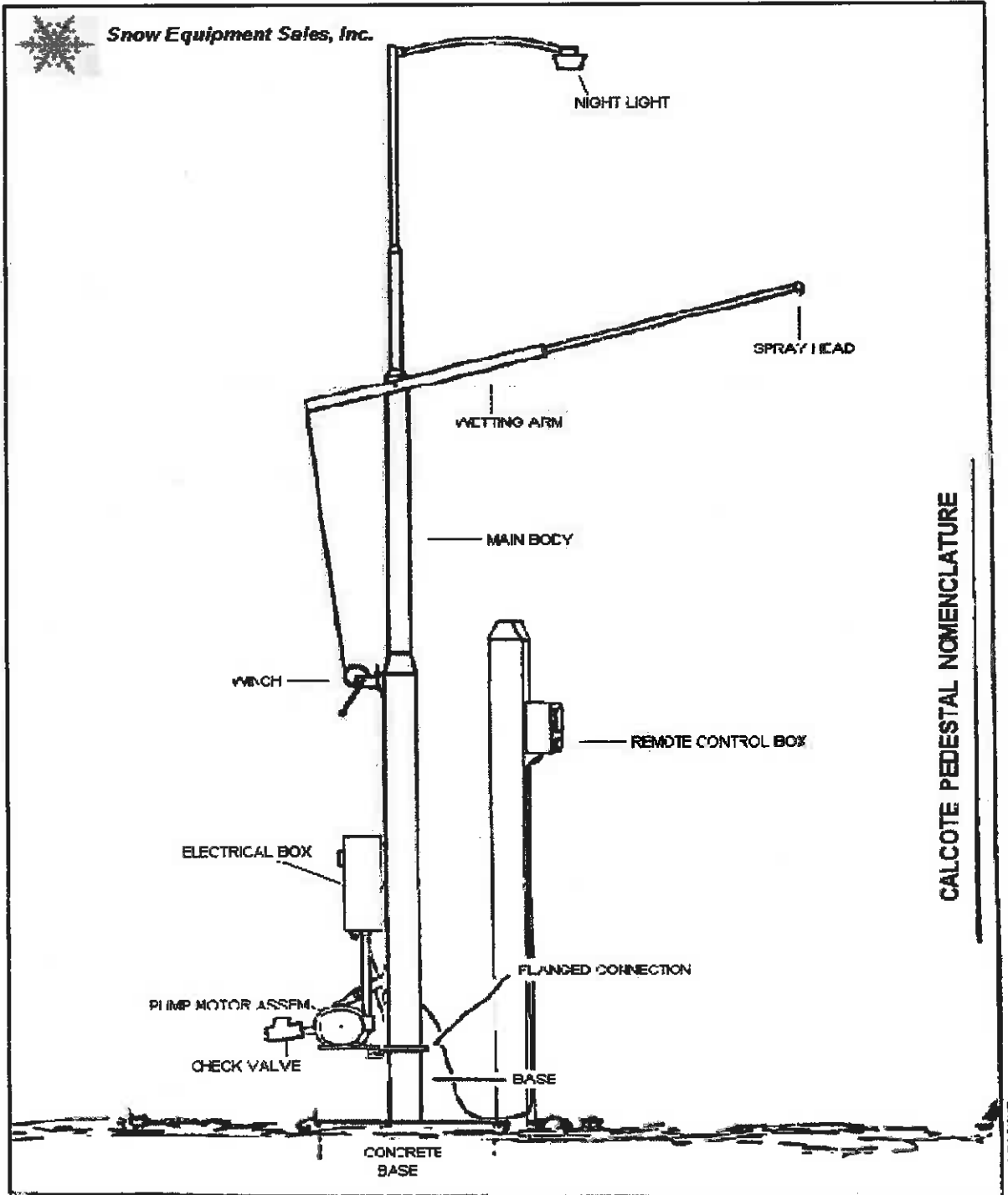
Section 2 – Parts and Operation

Section 2 – CP-50-RC Parts and Operation.....	2
Calcote Pedestal.....	2.1
Stand and Hardware.....	2.2
Pump and Plumbing.....	2.3
Pump Information.....	2.4
Spray Bar Mounting Options.....	2.5
Spray Bar Assembly.....	2.6
Spray Bar Display.....	2.7
Tank Plumbing.....	2.8
Single Tank Plumbing.....	2.9
Double Tank Plumbing.....	2.10
Winch Assembly.....	2.11
Winch Information.....	2.12

2.1 – Calcote Pedestal

CALCOTE PEDESTAL

Overhead Dispensing System
Model CP-50-RC



2.1 – Calcote Pedestal

DESCRIPTION:

The Calcote Pedestal Model CP-50-RC overhead dispensing systems are designed to rapidly apply a predetermined amount of liquid deicing material to trucks loaded with road deicing materials (salt or salt / abrasive mixtures). The main fabricated steel components are hot dip galvanized inside and out for corrosion protection, minimum maintenance, and long life. The night-light allows for illumination during low light conditions.

SPECIFICATIONS:

Height	10' 4"
Buried Depth	-
Spray Arm - Adjustable height by hand operated winch	9' 4"
Length from main body	8' 6"
High adjustment	9' 4"
Horizontal Height	9' 4"
Low Adjustment	8' 6"

Spray Head:

1 ½" Schedule 80 PVC with four full cone brass nozzles spaced at 15 inch intervals and 1 ½' flow control valve.

Night Light:

175 Watt dusk-to-dawn light with photocell for safer evening operations.

Pump / Motor:

Stainless Steel, 2' suction x 1 ½' discharge, 60 GPM typical flow, close coupled 2hp motor capable of 3450 rpm, TEFC, 110 / 220 V, single phase, class B electrical motor.

Pump Motor Housing:

Rotationally molded polyethylene with UV stabilizer. Provides protection to the pump / motor from the aggressive effects of the winter road maintenance environment.

SECTION 2 – PARTS & OPERATION

2.1 – Calcote Pedestal

Specifications:

Calcote Pedestal

Model CP-50-RC

Main Electrical Control Box:

NEMA 4X weather tight enclosure with hinged lid for electrical component protection. Includes quick disconnect, motor starter, fuse for night light, terminal strip; all components are pre-wired and totally enclosed.

Remote Control Box:

Post mounted for driver's convenience on 6"x6"x10' treated post. NEMA 4X enclosure containing 0 - 60 second adjustable timer, "Run" & "Emergency Stop" buttons.

Tank to Pedestal Plumbing:

Tank outlet 2" stainless steel coupled to 2" flexible PVC hose coupled to 2" brass check valve at suction side of pump. All hose clamps are stainless steel. All components are resistant to the effects of deicing materials, liquid and dry.

Truckmount Tank Load / Unload Plumbing:

Hoses, two each, 1" x 25', with appropriate polypropylene valves and quick couple fittings to load and unload truck mount prewet tanks. All hose clamps to be stainless steel.

Hot Dip Galvanizing:

Meets ASTM specification A-123. Protective coating over all major fabricated steel components, inside and out.

Hand Winch:

800 pound rated with a 2" x 20' strap from winch to backside of spray arm.

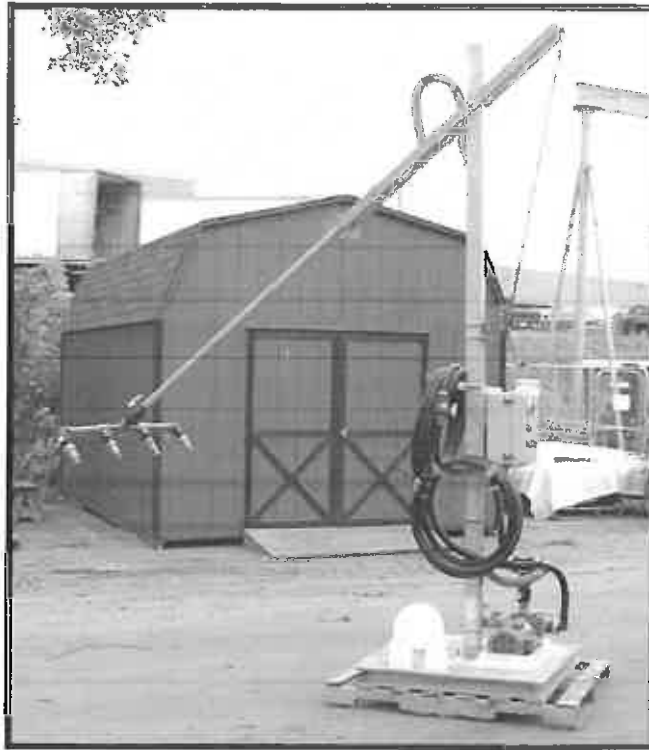
3 Way Ball Valve:

The CP-50-RC unit comes with 3 way ball valves and hoses that allows for loading and unloading of trucks dealing with prewet systems.

Electric Ball Valve:

The electric ball valve is required when the storage tank height exceeds 10ft to prevent siphoning throughout the system. The valve will automatically open and close when pump is activated and deactivated.

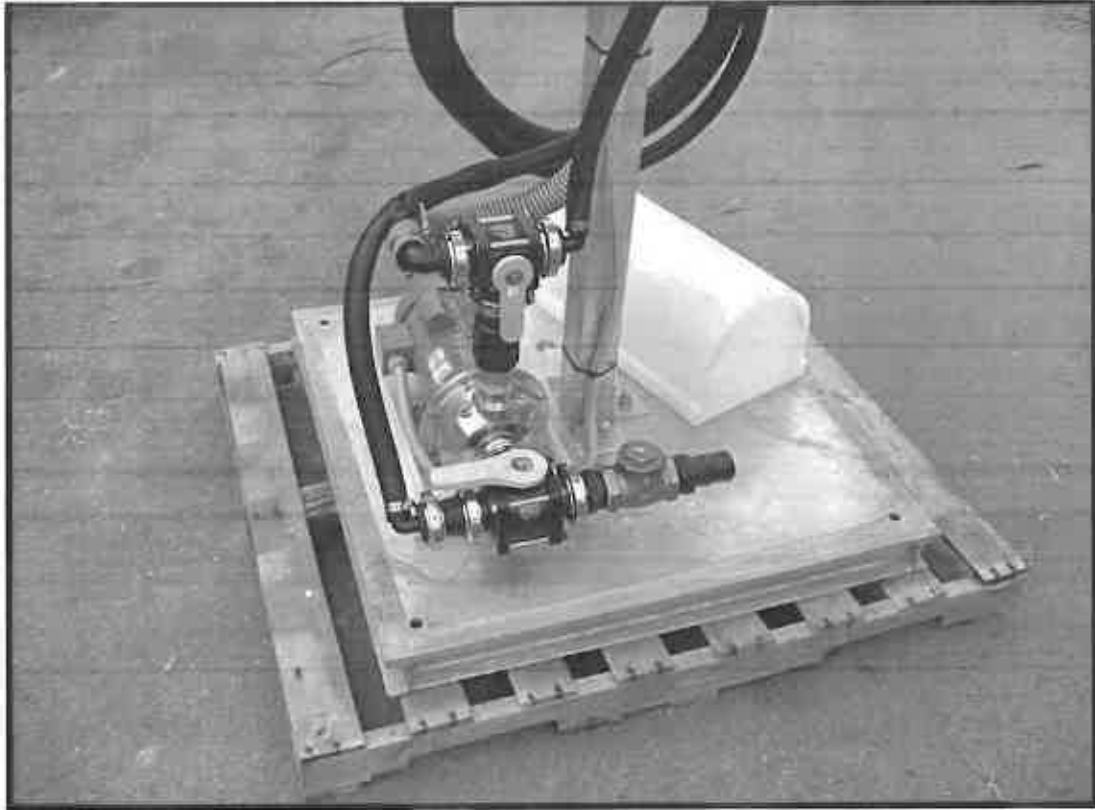
2.2 - Stand and Hardware



	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1.	54-00021	WELD SPRAY ARM BASE	1
2.	54-00022	WELD SPRAY ARM POST	1
	X5C1220G	BOLT HD1/2" X 2" G5 HDG (A)	3
	XNC12G	NUT HEX 1/2" HDG (A)	3
	FWA12G	FW 1/2" GALV	6
	LWM12G	LW 1/2" HD GALV	3
3.	54-00024	WELDMENT POST BOOM	1
	X5C5870Z	BOLT 5/8" X 7" C	1
	WFU58Z	FW PLTD 5/8" (A)	2
	ESN21NE101	LOCK NUT NYLON 5/8" (A)	1
4.	54-00025	WELDMENT CORD HOLDER	2
	NAT243-485	U-BOLT SQ 3" X 3/8" 7"	4
	LWM838Z	LW PLTD 3/8" (A)	8
	XNC38Z	NUT 3/8" C (A)	8
5.	56-00101	PIPE BOOM POST	1
	H200-U	U-BOLT MUFFLER CLAMP 2"HD SS	2
	1XNC38	NUT C SS 3/8"	4
	1LWM38	LW SS 3/8"	4
6.	54-00023	WELD POST WINCH MNT	1
7.	52-00249	SPRAY BAR CP ASSY	1
8.	6Z001	HAND WINCH 900 LB.	1
9.	4KH21	STRAP 2" X 20' FOR 6Z001	1
	2G790	SHACKLE 3/4 TON	1
10.	CP100	COVER PUMP CP	1
11.	97535K3	CAP SQUARE POST 3"	1

SECTION 2 – PARTS & OPERATION

2.3 – Pump and Plumbing



	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1.	3MS1G4CO	PUMP/MOTOR 2HP	1
2.	M220MPTSS	FLANGE 2" FP X 2" MT SS	1
3.	FC220	CLAMP 2" HD	3
4.	MV220SL	VALVE SIDE LOAD 2" FP	1
5.	200G	GASKET 2" EPDM	3
		SUCTION FROM TANK	
6.	M220MPT	FLANGE 2" FP X 2" MT	1
7.	T-413-B-2	CHECK VALVE 2" BRONZE	1
8.	HB200	HOSE BARB 2" PP	1
		SUCTION FROM HOSE	
9.	M200150BRB90	FLANGE 2" X 1 1/2" HB	1
10.	M220200CPG	FLANGE 2" FP X 2" STD PORT	1
		PRESSURE TO VALVE	
11.	NIP150-3-SS	NIPPLE 1 1/2" X 3" SS	1
12.	CPLG150	COUPLING 1 1/2" PP	1
13.	M200150MPT	FLANGE 2" X 1 1/2" MNPT	1
14.	MV200SL	VALVE MANIFOLD 2" SIDE	1
15.	150G	GASKET 1 1/2" EPDM	4
16.	FC200	CLAMP FLANGE 2"	4
		PRESSURE TO HOSE	
17.	M200100BRB90	FLANGE 2" X 1" HB	1
		PRESSURE TO BOOM	
18.	M200150BRB90	FLANGE 2" X 1 1/2" HB	1

2.4 – Pump Information



Installation, Operation and Maintenance Instructions

Model NPE/ NPE-F



DESCRIPTION & SPECIFICATIONS:

The Models NPE (close-coupled) and NPE-F (frame-mounted) are end suction, single stage centrifugal pumps for general liquid transfer service, booster applications, etc. Liquid-end construction is all AISI Type 304 stainless steel, stamped and welded. Impellers are fully enclosed, non-trimable to intermediate diameters. Casings are fitted with a diffuser for efficiency and for negligible radial shaft loading.

Close-coupled units have NEMA 48J or 56J motors with C-face mounting and threaded shaft extension. Frame-mounted units can be coupled to motors through a spacer coupling, or belt driven.

1. Important:

1.1. Inspect unit for damage. Report any damage to carrier/dealer immediately.

1.2. Electrical supply must be a separate branch circuit with fuses or circuit breakers, wire sizes, etc., per National and Local electrical codes. Install an all-leg disconnect switch near pump.

CAUTION

Always disconnect electrical power when handling pump or controls.

1.3. Motors must be wired for proper voltage. Motor wiring diagram is on motor nameplate. Wire size must limit maximum voltage drop to 10% of nameplate voltage at motor terminals, or motor life and pump performance will be lowered.

1.4. Always use horsepower-rated switches, contactor and starters.

1.5. Motor Protection

1.5.1. Single-phase: Thermal protection for single-phase units is sometimes built in (check nameplate). If no built-in protection is provided, use a contactor with a proper overload. Fusing is permissible.

1.5.2. Three-phase: Provide three-leg protection with properly sized magnetic starter and thermal overloads.

1.6. Maximum Operating Limits:

Liquid Temperature: 212 F (100 C) with standard seal.
250 F (120 C) with optional high temp seal.
Pressure: 75 PSI.
Starts Per Hour: 20, evenly distributed.

1.7. Regular inspection and maintenance will increase service life. Base schedule on operating time. Refer to Section 8.

2. Installation:

2.1. General

2.1.1. Locate pump as near liquid source as possible (below level of liquid for automatic operation).

2.1.2. Protect from freezing or flooding.

2.1.3. Allow adequate space for servicing and ventilation.

2.1.4. All piping must be supported independently of the pump, and must "line-up" naturally.

CAUTION

Never draw piping into place by forcing the pump suction and discharge connections.

2.1.5. Avoid unnecessary fittings. Select sizes to keep friction losses to a minimum.

2.2. Close-Coupled Units:

2.2.1. Units may be installed horizontally, inclined or vertically.

CAUTION

Do not install with motor below pump. Any leakage or condensation will affect the motor.

2.2.2. Foundation must be flat and substantial to eliminate strain when tightening bolts. Use rubber mounts to minimize noise and vibration.

2.2.3. Tighten motor hold-down bolts before connecting piping to pump.

2.3. Frame-Mounted Units:

2.3.1. Bedplate must be grouted to a foundation with solid footing. Refer to Fig. 1.

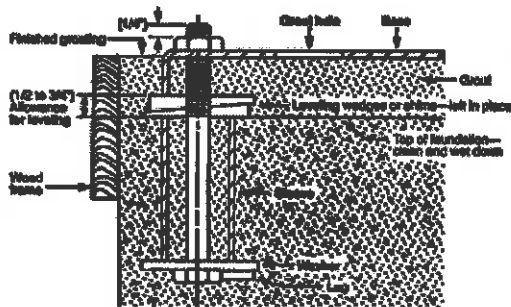


Figure 1

2.4 – Pump Information Continued

2.3.2. Place unit in position on wedges located at four points (two below approximate center of driver and two below approximate center of pump). Adjust wedges to level unit. Level or plumb suction and discharge flanges.

2.3.3. Make sure bedplate is not distorted and final coupling alignment can be made within the limits of movement of motor and by shimming, if necessary.

2.3.4. Tighten foundation bolts finger tight and build dam around foundation. Pour grout under bedplate making sure the areas under pump and motor feet are filled solid. Allow grout to harden 48 hours before fully tightening foundation bolts.

2.3.5. Tighten pump and motor hold-down bolts before connecting the piping to pump.

3. Suction Piping:

3.1. Low static suction lift and short, direct, suction piping is desired. For suction lift over 10 feet and liquid temperatures over 120 F, consult pump performance curve for Net Positive Suction Head Required.

3.2. Suction pipe must be at least as large as the suction connection of the pump. Smaller size will degrade performance.

3.3. If larger pipe is required, an eccentric pipe reducer (with straight side up) must be installed at the pump.

3.4. Installation with pump below source of supply:

3.4.1. Install full flow isolation valve in piping for inspection and maintenance.

CAUTION

Do not use suction isolation valve to throttle pump.

3.5. Installation with pump above source of supply:

3.5.1. Avoid air pockets. No part of piping should be higher than pump suction connection. Slope piping upward from liquid source.

3.5.2. All joints must be airtight.

3.5.3. Foot valve to be used only if necessary for priming, or to hold prime on intermittent service.

3.5.4. Suction strainer open area must be at least triple the pipe area.

3.6. Size of inlet from liquid source, and minimum submergence over inlet, must be sufficient to prevent air entering pump through vortexing. See Figs. 2-5

3.7. Use 3-4 wraps of Teflon tape to seal threaded connections.



Figure 2

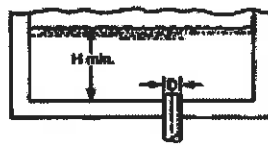


Figure 3

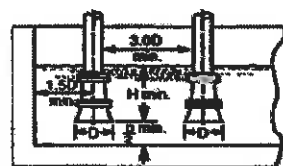


Figure 4

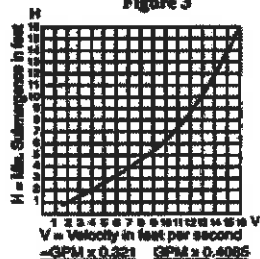


Figure 5

4. Discharge Piping:

4.1. Arrangement must include a check valve located between a gate valve and the pump. The gate valve is for regulation of capacity, or for inspection of the pump or check valve.

4.2. If an increaser is required, place between check valve and pump.

4.3. Use 3-4 wraps of Teflon tape to seal threaded connections.

5. Motor-To-Pump Shaft Alignment:

5.1. Close-Coupled Units:

5.1.1. No field alignment necessary.

5.2. Frame-Mounted Units:

5.2.1. Even though the pump-motor unit may have a factory alignment, this could be disturbed in transit and must be checked prior to running. See Fig. 6.

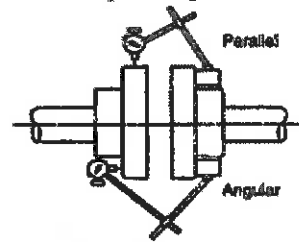


Figure 6

5.2.2. Tighten all hold-down bolts before checking the alignment.

5.2.3. If re-alignment is necessary, always move the motor. Shim as required.

5.2.4. Parallel misalignment - shafts with axis parallel but not concentric. Place dial indicator on one hub and rotate this hub 360 degrees while taking readings on the outside diameter of the other hub. Parallel alignment occurs when Total Indicator Reading is .005", or less.

5.2.5. Angular misalignment - shafts with axis concentric but not parallel. Place dial indicator on one hub and rotate this hub 360 degrees while taking readings on the face of the other hub. Angular alignment is achieved when Total Indicator Reading is .005", or less.

5.2.6. Final alignment is achieved when parallel and angular requirements are satisfied with motor hold-down bolts tight.

CAUTION

Always recheck both alignments after making any adjustment.

6. Rotation:

6.1. Correct rotation is right-hand (clockwise when viewed from the motor end). Switch power on and off quickly. Observe shaft rotation. To change rotation:

6.1.1. Single-phase motor: Non-reversible.

6.1.2. Three-phase motor: Interchange any two power supply leads.

7. Operation:

7.1. Before starting, pump must be primed (free of air and suction pipe full of liquid) and discharge valve partially open.

CAUTION

Pumped liquid provides lubrication. If pump is run dry, rotating parts will seize and mechanical seal will be damaged. Do not operate at or near zero flow. Energy imparted to the liquid is converted into heat. Liquid may flash to vapor. Rotating parts require liquid to prevent scoring or seizing.

2.4 – Pump Information Continued

7.2. Make complete check after unit is run under operating conditions and temperature has stabilized. Check for expansion of piping. On frame-mounted units coupling alignment may have changed due to the temperature differential between pump and motor. Recheck alignment.

8. Maintenance:

8.1. Close-Coupled Unit. Ball bearings are located in and are part of the motor. They are permanently lubricated. No greasing required.

8.2. Frame-Mounted Units:

8.2.1. Bearing frame should be regreased every 2,000 hours or 3 month interval, whichever occurs first. Use a #2 sodium or lithium based grease. Fill until grease comes out of relief fittings, or lip seals, then wipe off excess.

8.2.2. Follow motor and coupling manufacturers' lubrication instructions.

8.2.3. Alignment must be rechecked after any maintenance work involving any disturbance of the unit.

9. Disassembly:

Complete disassembly of the unit will be described. Proceed only as far as required to perform the maintenance work needed.

9.1. Turn off power.

9.2. Drain system. Flush if necessary.

9.3. Close-Coupled Units: Remove motor hold-down bolts.

Frame-Mounted Units: Remove coupling, spacer, coupling guard and frame hold-down bolts.

9.4. Disassembly of Liquid End:

9.4.1. Remove casing bolts (370).

9.4.2. Remove back pull-out assembly from casing (100).

9.4.3. Remove impeller locknut (304).

CAUTION

Do not insert screwdriver between impeller vanes to prevent rotation of close-coupled units. Remove cap at opposite end of motor. A screwdriver slot or a pair of flats will be exposed. Using them will prevent impeller damage.

9.4.4. Remove impeller (101) by turning counter-clockwise when looking at the front of the pump. Protect hand with rag or glove.

CAUTION

Failure to remove the impeller in a counter-clockwise direction may damage threading on the impeller, shaft or both.

9.4.5. With two pry bars 180 degrees apart and inserted between the seal housing (184) and the motor adapter (108), carefully separate the two parts. The mechanical seal rotary unit (383) should come off the shaft with the seal housing.

9.4.6. Push out the mechanical seal stationary seat from the motor side of the seal housing.

9.5. Disassembly of Bearing Frame:

9.5.1. Remove bearing cover (109).

9.5.2. Remove shaft assembly from frame (228).

9.5.3. Remove lip seals (138 & 139) from bearing frame and bearing cover if worn and are being replaced.

9.5.5. Use bearing puller or arbor press to remove ball bearings (112 & 168).

10. Reassembly:

10.1. All parts should be cleaned before assembly.

10.2. Refer to parts list to identify required replacement items. Specify pump index or catalog number when ordering parts.

10.3. Reassembly is the reverse of disassembly.

10.4. Observe the following when reassembling the bearing frame:

10.4.1. Replace lip seals if worn or damaged.

10.4.2. Replace ball bearings if loose, rough or noisy when rotated.

10.4.3. Check shaft for runout. Maximum permissible is .002" T.I.R.

10.5. Observe the following when reassembling the liquid-end:

10.5.1. All mechanical seal components must be in good condition or leakage may result. Replacement of complete seal assembly, whenever seal has been removed, is good standard practice.

It is permissible to use a light lubricant, such as glycerin, to facilitate assembly. Do not contaminate the mechanical seal faces with lubricant.

10.5.2. Inspect casing O-ring (513) and replace if damaged. This O-ring may be lubricated with petroleum jelly to ease assembly.

10.5.3. Inspect guidevane O-ring (349) and replace if worn.

CAUTION

Do not lubricate guidevane O-ring (349). Insure it is not pinched by the impeller on reassembly.

10.6. Check reassembled unit for binding. Correct as required.

10.7. Tighten casing bolts in a star pattern to prevent O-ring binding.

11. Trouble Shooting Chart**MOTOR NOT RUNNING**

(See causes 1 thru 6)

LITTLE OR NO LIQUID DELIVERED:

(See causes 7 thru 17)

POWER CONSUMPTION TOO HIGH:

(See causes 4, 17, 18, 19, 22)

EXCESSIVE NOISE AND VIBRATION:

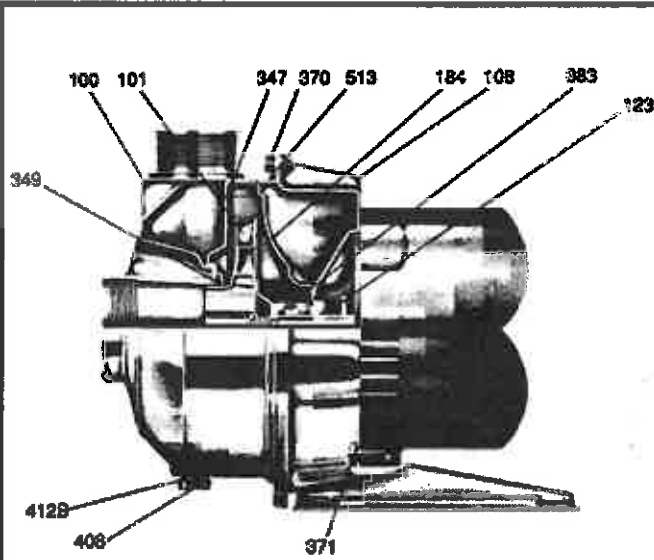
(See causes 4, 6, 9, 13, 15, 16, 18, 20, 21, 22)

PROBABLE CAUSE:

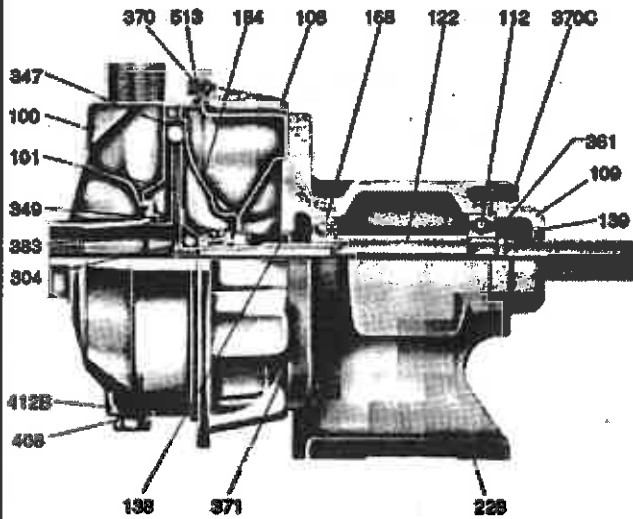
1. Tripped thermal protector
2. Open circuit breaker
3. Blown fuse
4. Rotating parts binding
5. Motor wired improperly
6. Defective motor
7. Not primed
8. Discharge plugged or valve closed
9. Incorrect rotation
10. Foot valve too small, suction not submerged, inlet screen plugged.
11. Low voltage
12. Phase loss (3-phase only)
13. Air or gasses in liquid
14. System head too high
15. NPSHA too low:
Suction lift too high or suction losses excessive. Check with vacuum gauge.
16. Impeller worn or plugged
17. Incorrect impeller diameter
18. Head too low causing excessive flow rate
19. Viscosity or specific gravity too high
20. Worn bearings
21. Pump or piping loose
22. Pump and motor misaligned

SECTION 2 – PARTS & OPERATION

2.4 – Pump Information Continued



NPE



NPE-F

Liquid End Components		
Item No.	Description	Materials
100	Casing	AISI 304 Stainless Steel
101	Impeller	
184	Seal Housing	
304	Impeller Locknut	
347	Guldevane	
349	O-Ring, Guldevane	Buna-N
370	Socket Hd. Screws, Casing	AISI 304 S.S.
383	Mechanical Seal	** see chart
408	Drain & Vent Plug, Casing	AISI 304 S.S.
412B	O-Ring, Drain & Vent Plug	Buna-N
513	O-Ring, Casing	Buna-N
Power End Components		
108	Adapter	AISI 304 S.S.
109	Bearing Cover	Cast Iron
112	Ball Bearing (Outboard)	Steel
122	Shaft	AISI 303 S.S.
138	Lip Seal (Inboard)	Buna/Steel
139	Lip Seal (Outboard)	Buna/Steel
168	Ball Bearing (Inboard)	Steel
228	Bearing Frame	Cast Iron
361	Snap Ring	Steel
370C	Hex. Hd. Cap Screw, Brg. Cvr.	Plated Steel
371	Hex. Hd. Cap Screw, Adapter	Plated Steel

**Mechanical Seal-Item 383						
Part No.	Service	Rotary	Stationary	Elastomer	Metal Parts	Grade Type
10K46	Standard	Carbon	Ceramic	Buna	18-8 S.S.	21
10K16	Option-High Temp.		NI-Resist	EPR		
10K24	Option-Chemical Duty		Ceramic	Viton		
10K55	Option-High Temp.		Tungsten			
10K29	Option-Severe Duty		Silicon Carbon	Buna		

LIMITED WARRANTY

This warranty applies to all pumps and related accessories manufactured and/or supplied by Goulds Pumps, Inc. - Water Systems Division.

Any part or parts found to be defective within the warranty period shall be replaced at no charge to the buyer or any subsequent owner during the warranty period. The warranty period shall exist for twelve (12) months from date of installation, or eighteen (18) months from date of manufacture, whichever expires first.

A consumer who believes that a warranty claim exists must contact the authorized dealer from whom the equipment was originally purchased and furnish complete details regarding the claim. The dealer is authorized to adjust any warranty claim utilizing Goulds Customer Relations Department and its distributor organization.

This warranty excludes: (a) Labor, transportation and related costs incurred by the consumer to make the allegedly defective equipment available to the dealer for inspection. (b) Re-installation costs of repaired equipment. (c) Re-installation costs of replacement equipment. (d) Consequential damages of any kind. (e) Reimbursement for loss caused by interruption of service.



Form No. NPE-2/92

2.5 – Spray Bar Mounting Options

The Spray Bar can be mounted many different ways. The two most common mounting solutions are:

- On the CP-50 Stand that is supplied with the base unit / pump station.

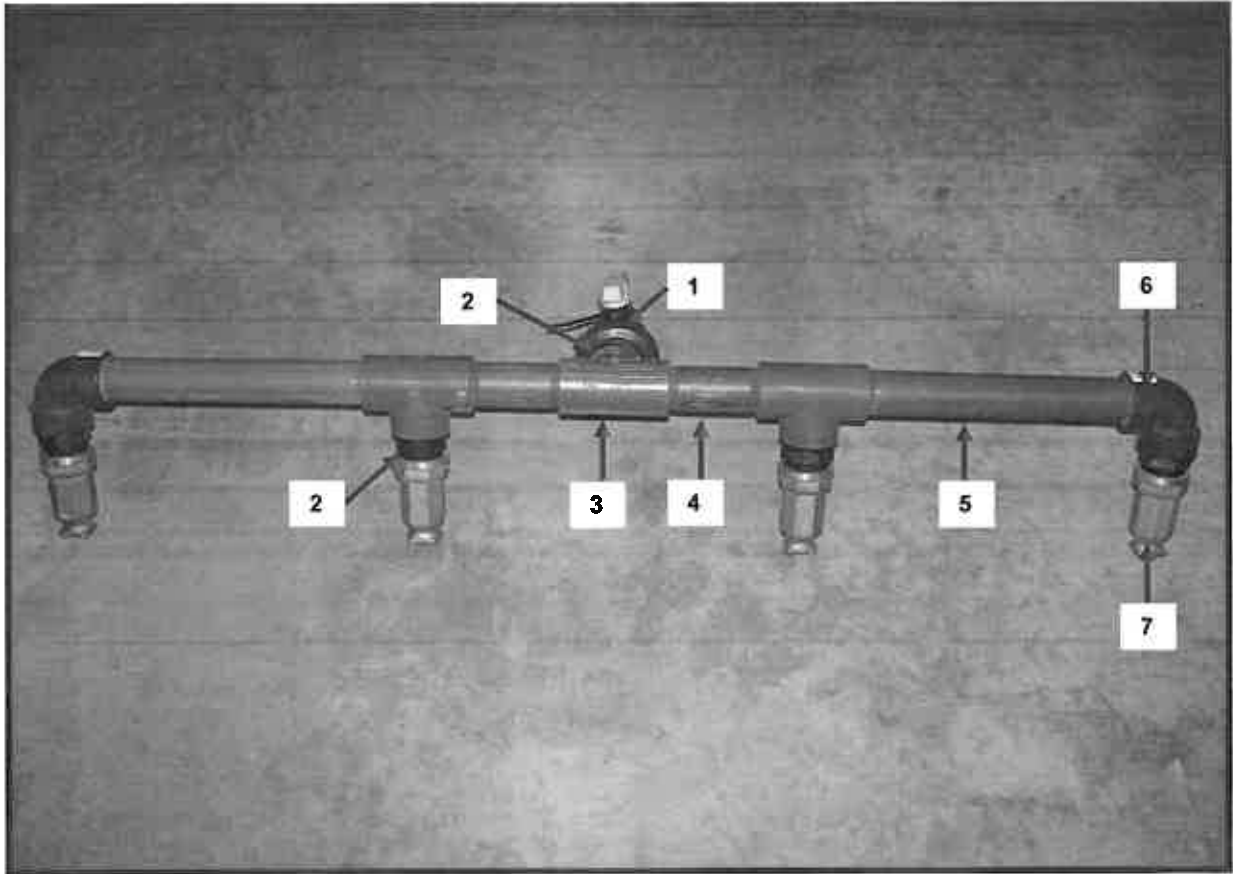


- The second most common mounting option is attaching the Spray Bar to a Utility Pole.



SECTION 2 – PARTS & OPERATION

2.6 – Spray Bar Assembly

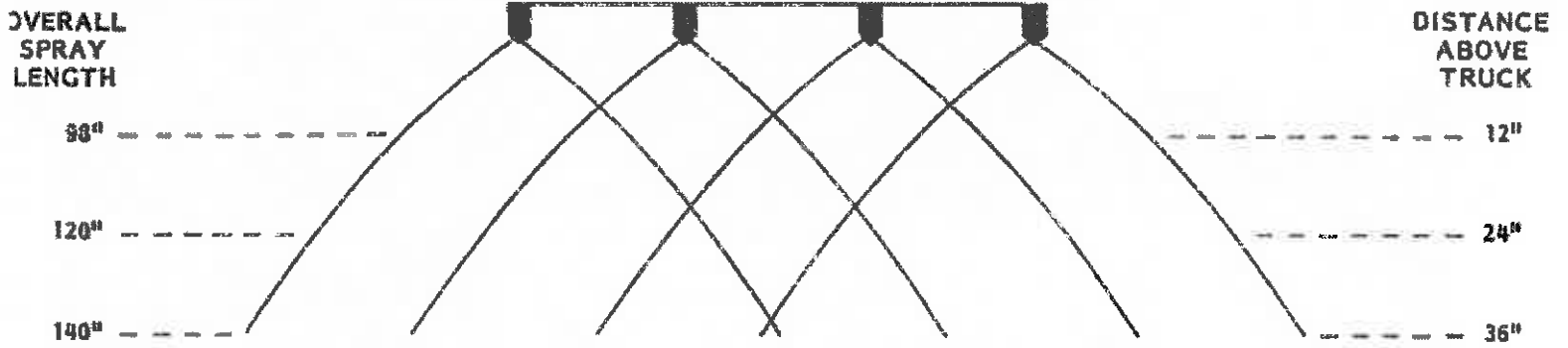


<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY.</u>
1.	UV150FP 1-1/2" Single Union Ball Valve	1
2.	NIP150-SH 1-1/2" Nipple X CL PP	5
3.	TEE150-THRD-PVC 1-1/2" Threaded TEE PVC80	3
4.	56-00455 1-1/2" x 4.5 Nipple PVC80	2
5.	56-00454 1-1/2" x 12" Nipple PVC80	2
6.	EL150-90 1-1/2" 90 Elbow Poly	2
7.	1-1/2H-290WSQ 1-1/2" Fulljet Square Nozzle	4

2.7 – Spray Bar Display

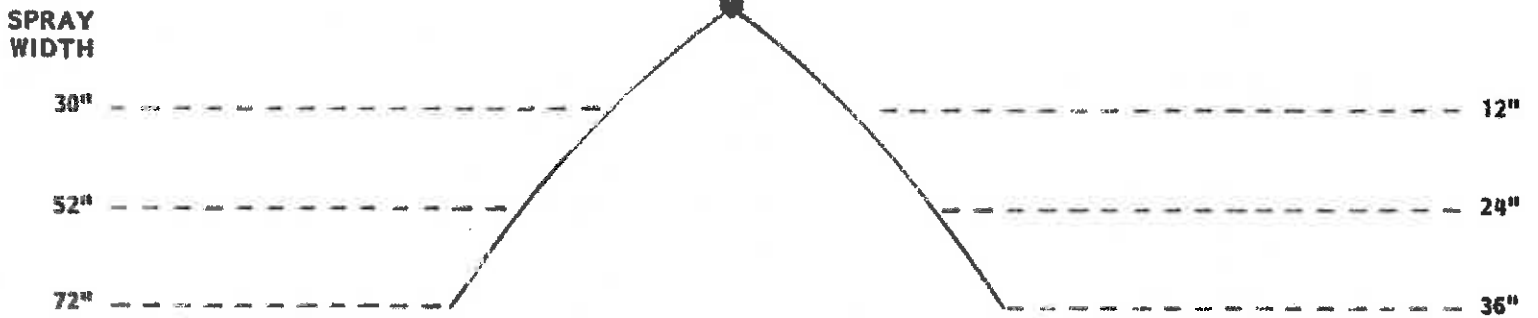
**CALCOTE PEDESTAL
FOUR NOZZLE SPRAY HEAD CONFIGURATION**

*SWORD EQUIPMENT SALES, INC.
1273 Air City Ave.
Dayton, OH 45404*



SPRAY COVERAGE DIMENSIONS

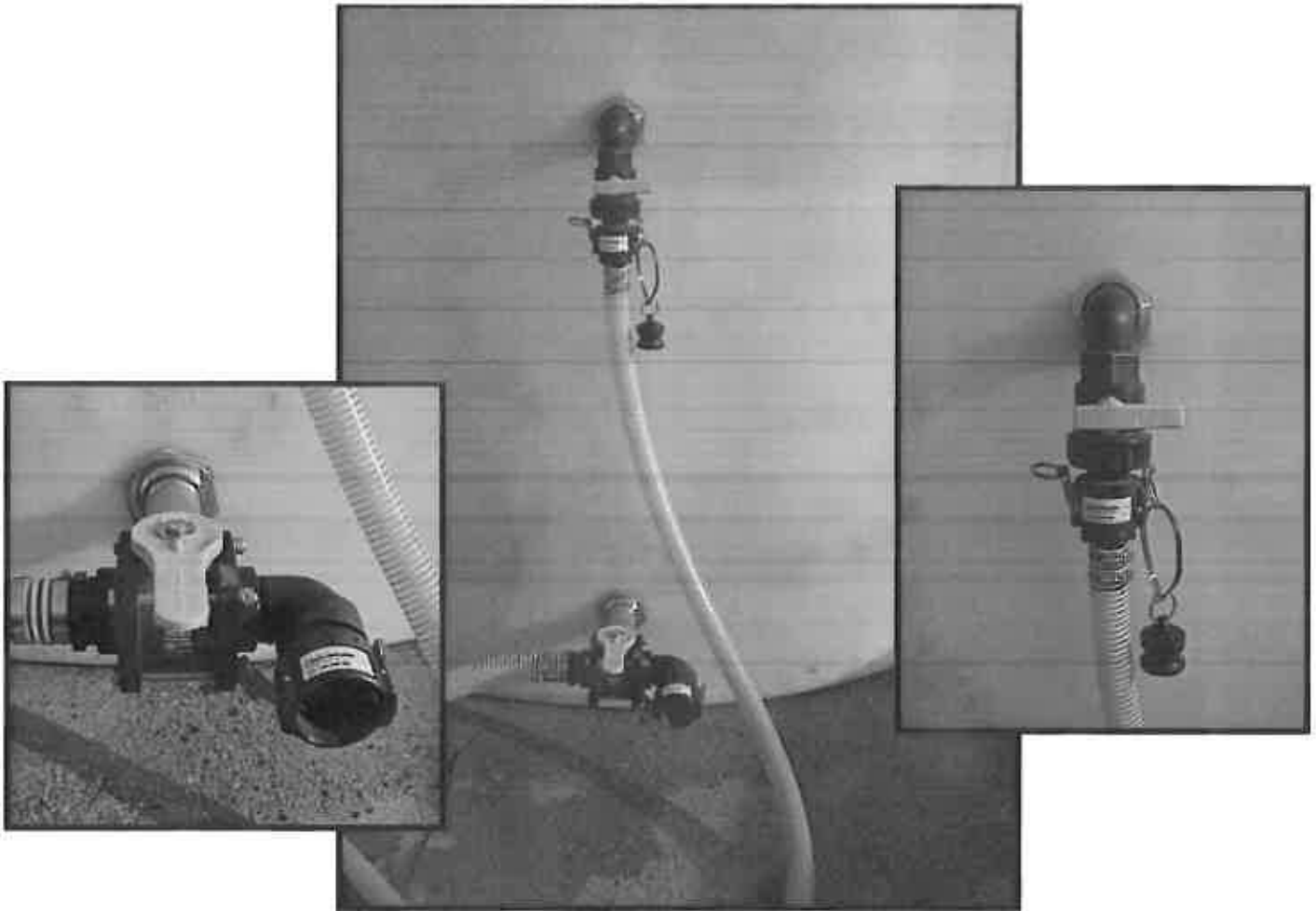
<u>Height Above Salt Truck</u>	<u>Area Covered</u>
12"	30" X 98"
24"	52" X 120"
36"	72" X 140"



Note. Figures above are approximate.

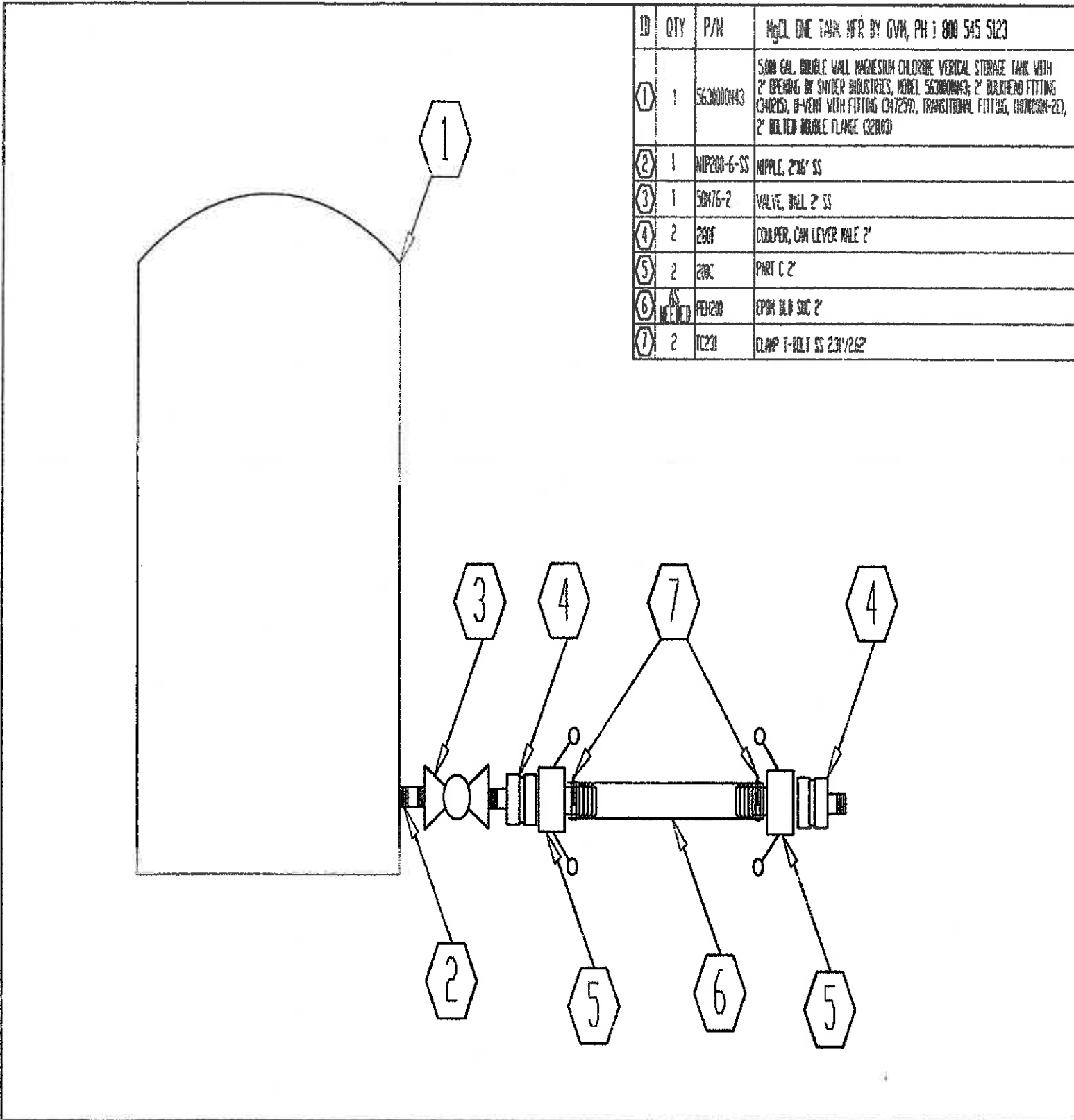
SECTION 2 – PARTS & OPERATION

2.8 – Tank Plumbing



	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1.	200B	2" B-COUPLER POLY	2
2.	SL200-90	STREET ELBOW 2" PP	2
3.	V200SL	VALVE 2" FP 3 WAY SIDE	1
4.	HB200	2" STRAIGHT HOSE BARB POLY	1
5.	MYCH-24SS	2" HOSE CLAMP S.S.	2
6.	NIP200-6-SS	2" X 6" NIPPLE S.S.	1
7.	BFC200SS	2" TANK ADAPTER S.S.	2
8.	UV200FPP	VALVE 2" SINGLE UNION	1
9.	200A	2" A-COUPLER POLY	1
10.	RB200-150	2" X 1-1/2" REDUCER BUSHING POLY	1
11.	HB150	1-1/2" STRAIGHT HOSE BARB POLY	1
12.	PVC150	1-1/2" FLEX HOSE	15 FT
13.	200PL	1-1/2" DUST PLUG POLY	1
14.	PVC200	2" FLEX HOSE	10 FT

2.9 – Single Tank Plumbing

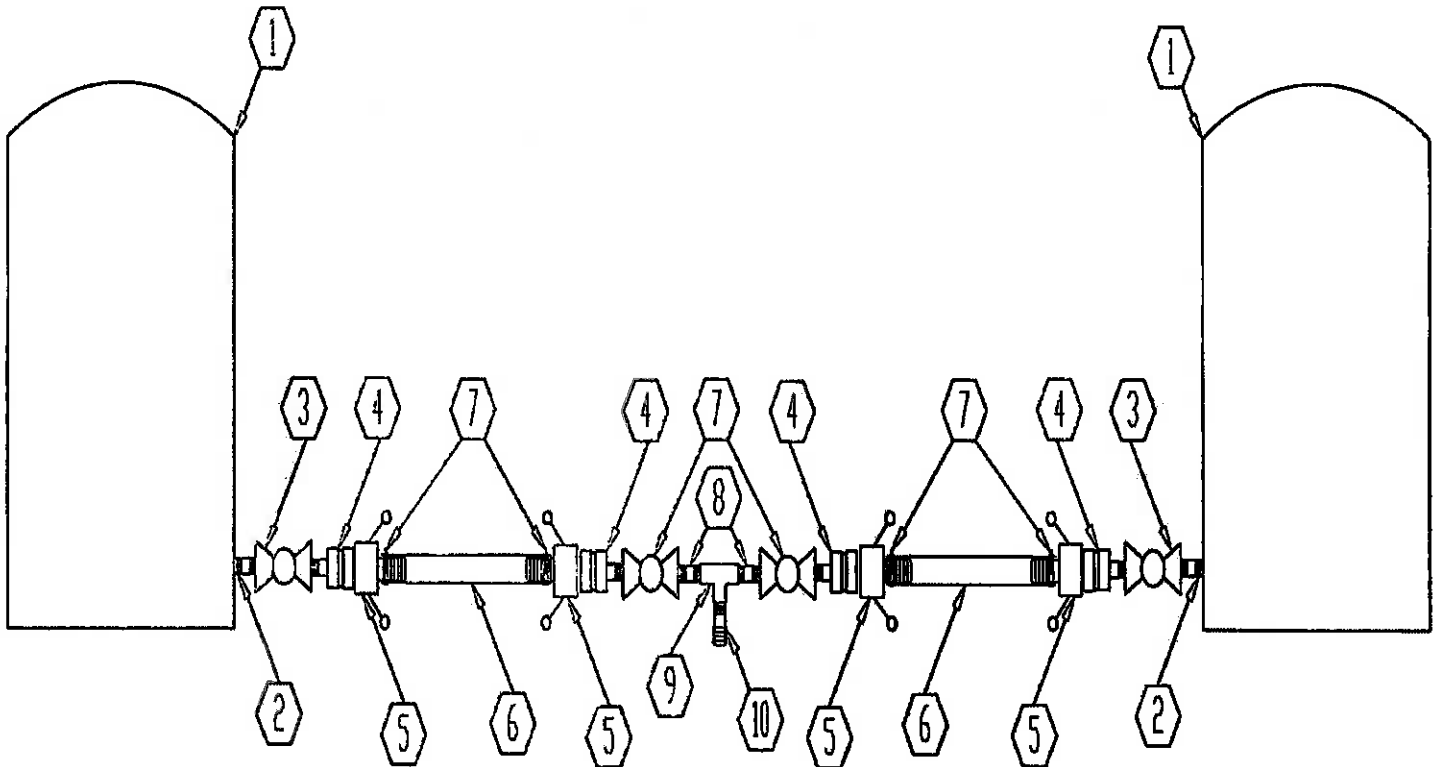


ID	QTY	P/N	Mfg. L. ONE TANK MFR BY GVM, PH: 800 545 5123
①	1	5630000143	5,000 GAL. DOUBLE WALL MAGNESIUM CHLORIDE VERTICAL STORAGE TANK WITH 2" OPENING BY SNYDER INDUSTRIES, MODEL 5630000143; 2" DOLBYHEAD FITTING (34025), U-VENT WITH FITTING (34729), TRANSITIONAL FITTING, (310250N-22), 2" BOLTED DOUBLE FLANGE (32100)
②	1	NIP200-6-SS	NIPPLE, 2"X6' SS
③	1	30475-2	VALVE, BALL 2" SS
④	2	200F	COUPLER, CAN LEVER MALE 2"
⑤	2	230C	PART C 2"
⑥	1	PER200	EPDM BLD SUC 2"
⑦	2	10231	CLAMP T-BOLT SS 2.31"X2.62"

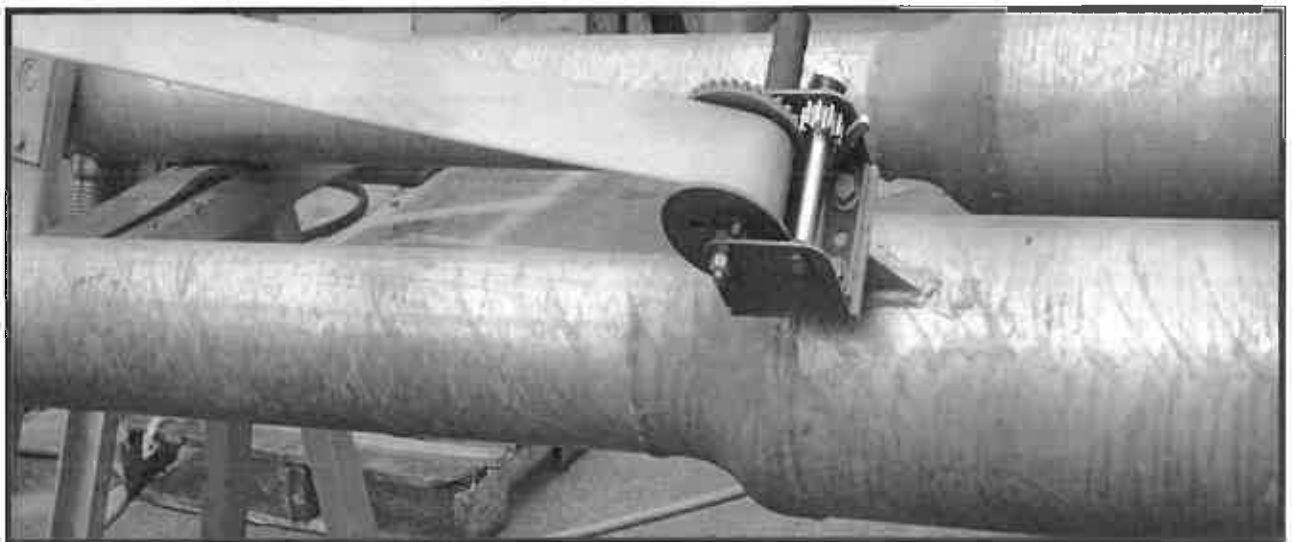
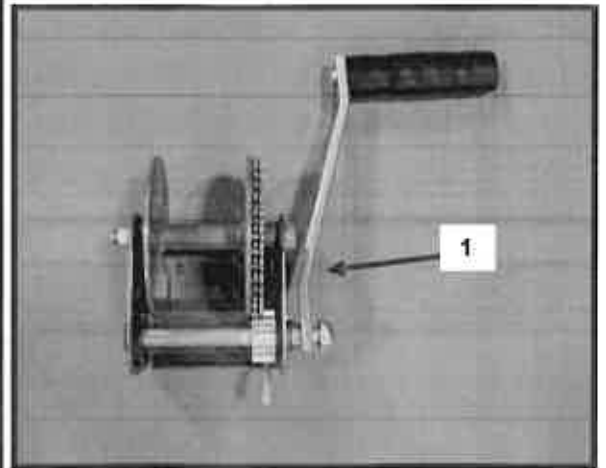
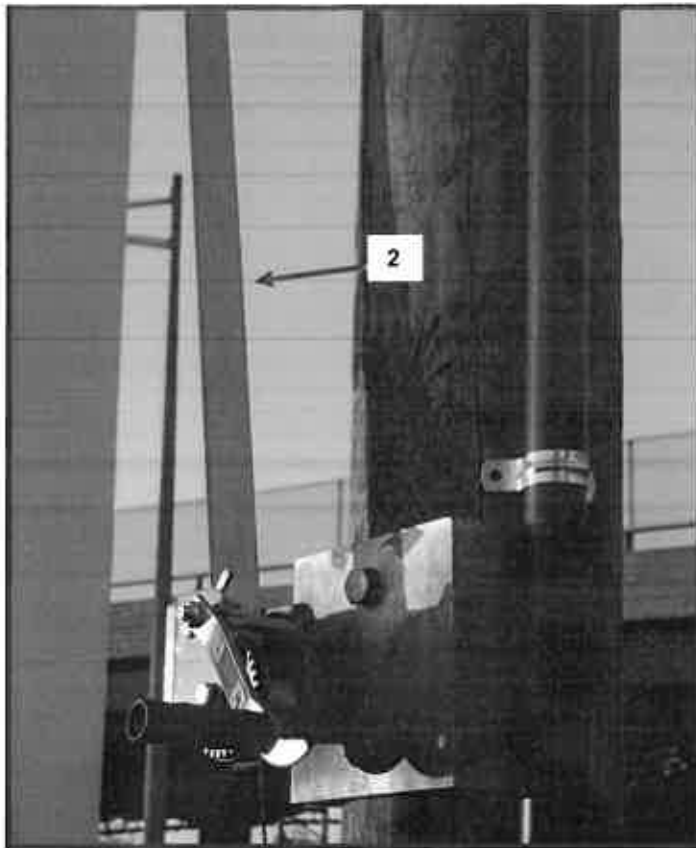
SECTION 2 – PARTS & OPERATION

2.10 – Double Tank Plumbing

ID	QTY	P/N	MqCL TWO TANK NFR BY GVM, PH 1 800 545 5123
①	2	563000W43	5,000 GAL. DOUBLE WALL MHEGESTON CHLORINE VERTICAL STORAGE TANK WITH 2" OPENING BY SNTICOR INDUSTRIES, MODEL 5630032W43; 2" BULKHEAD FITTING (348215), U-VENT WITH FITTINGS (347259), TRANSITIONAL FITTING, (107000N-2C), 2" BOLTED DOUBLE FLANGE (321003)
②	2	NP200-6-SS	HIPLLE, 2"X6" SS
③	2	50M76-2	VALVE, BALL 2" SS
④	4	200F	COUPLER, CAM LEVER MALE 2"
⑤	4	200C	PART C 2"
⑥	AS NEEDED	PEH200	EPDM BLD SUC 2"
⑦	4	TC231	CLAMP T-BOLT SS 2.31"/262"
⑧	2	V200FP	VALVE 2" FP BOLTED
⑨	2	NP200-SH	HIPLLE 2"X CL PP
⑩	1	TEE260	TEE 2" PP
⑪	4	HD200	HOSE BARB 2" PP



2.11 – Winch Assembly



	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1.	6Z001	HAND WINCH 900 LB.	1
2.	1DKL3	Strap 2" x 20' For 6Z001	1 (20')

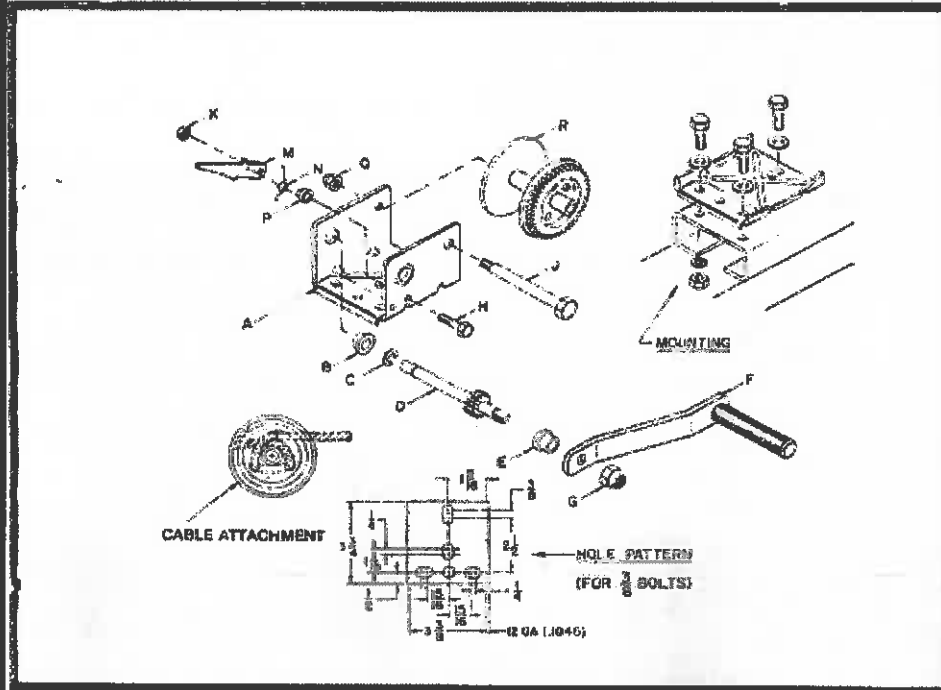
SECTION 2 – PARTS & OPERATION

2.12 – Winch Information



900 WINCH

**ILLUSTRATION/SPECS/
PARTS/OPERATION**



Ref. Let.	Description	Part No.
A	Winch Base	304288
B	Shaft Bushing	204006
C	E-Ring	205012
D	Drive Shaft	304008
E	Shaft Bushing	204007
F	Winch Handle	304016
G	Handle Nut	205015
H	Ratchet Bolt	205004
J	Reel Shaft	204805
K	Locknut	205168
M	Ratchet Lever	404035
N	Ratchet Spring	254118
P	Ratchet Spacer	404038
Q	Locknut	204603
R	Winch Reel	304281

**HANDLE AND NUT
MUST BE TIGHTENED
AGAINST DRIVE
SHAFT SHOULDER
BEFORE OPERATING
WINCH.**

SPECIFICATIONS

A high quality, multi-purpose winch. Frame is one-piece design with oilite shaft bearings, single-action ratchet, plastic handle grip, copper-brazed gear construction, welded reel. Baked enamel or plated finish. Single ratchet, 3.2:1 gear ratio. Load capacity—200 lbs. Reel capacity—3/16" dia. cable, 45 ft.

LUBRICATION

This winch has been fully lubricated at the factory, but for continued smooth performance and increased life, occasional greasing of gears and reel shafts and an occasional drop of oil on drive shaft bearings is recommended.

MOUNTING

For increased strength and safety, this winch should be mounted with three 3/8" bolts, washers, and lock washers as shown in the drawing.

NOTE

The winch finish can be protected and will provide longer service if it is periodically washed with water and then wiped with light oil or wax.

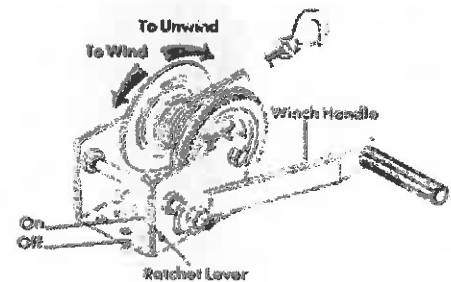
OPERATING INSTRUCTIONS

Wind cable or rope on winch reel drum by turning winch handle in clockwise direction with ratchet lever in "off" position. Place ratchet lever in "on" or up position to lock. See illustration. To unwind or "reel out" cable or rope, turn winch handle in counter-clockwise direction with ratchet lever in "off" or down position. Again, place ratchet lever in "on" position to lock. Important: Ratchet lever should always be placed in "on", or locked position before winch handle is released. Do not attempt to use ratchet mechanism to retard free-wheeling action of winch while "reeling out" cable or rope.

WARNING: Never exceed rated winch load! Excess load may cause premature failure and could result in serious personal injury. This winch is rated at 200 pounds with three layers of cable on a 3/4" Hub. Using more layers of cable increases the load on the winch.

CAUTION: Never apply load to winch with cable fully extended. Keep at least three full turns of cable on the reel. **SECURE LOAD PROPERLY. WHEN WINCHING OPERATION IS COMPLETE, DO NOT DEPEND ON WINCH TO SUPPORT LOAD.**

This winch is not recommended for scaffolding or any other applications in which persons may be positioned on or under the load at any time. See other side for warranty.



NOT FOR MOVEMENT OF HUMAN BEINGS

MANUFACTURED BY
DUTTON-LAINSON COMPANY
HASTINGS, NEBRASKA 68901

Drawing No 204812-8882

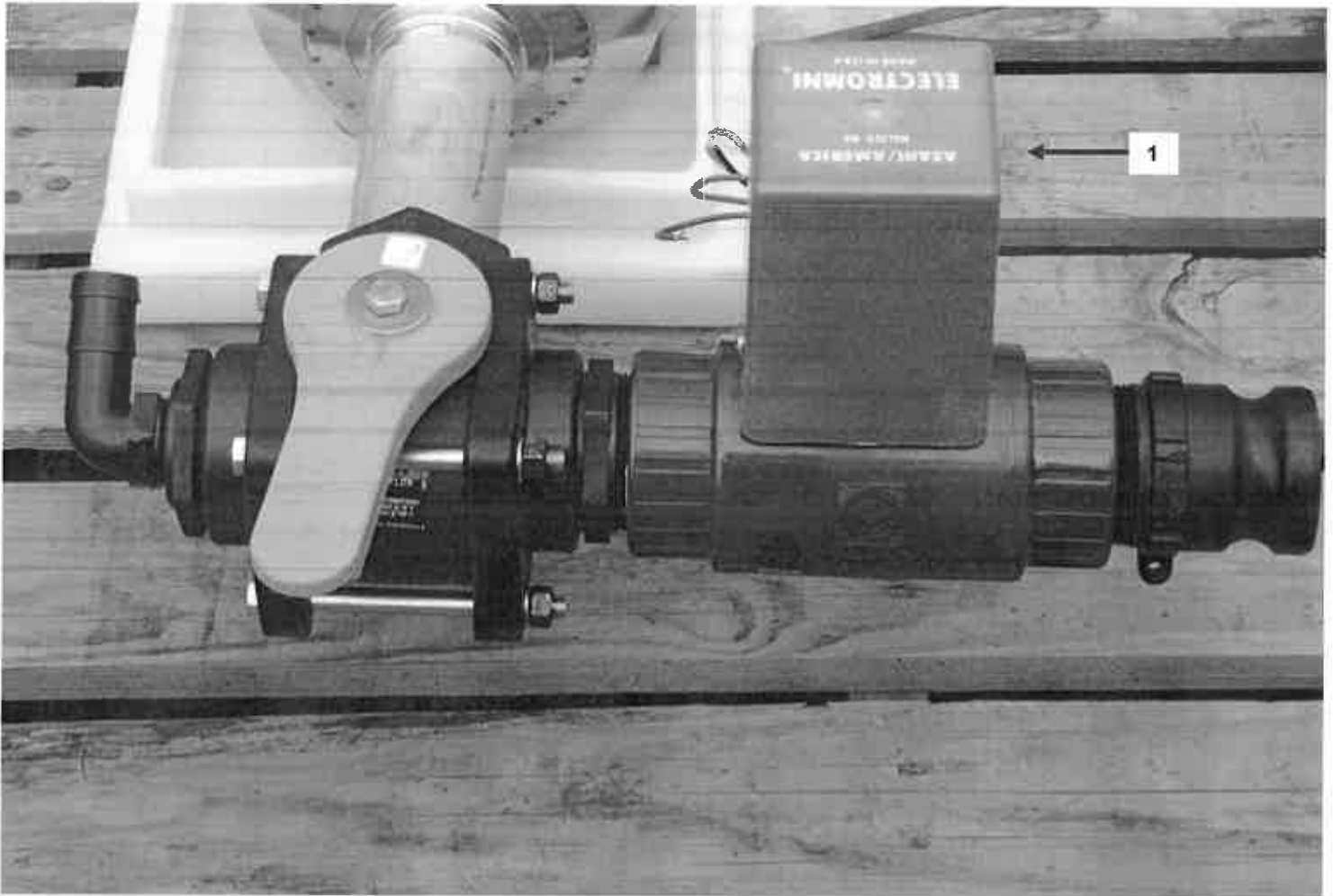
Founded in 1886 Made in U.S.A.

Printed in U.S.A.

Section 3 – Electrical

Section 3 – Electrical.....	3
Electric Ball Valve.....	3.1
Electric Ball Valve Operation.....	3.2
Electrical Control Box.....	3.3
Electrical Control Box Operation.....	3.4
Night Light.....	3.5

3.1 – Electric Ball Valve



<u>Part No.</u>	<u>Description</u>	<u>Qty</u>
1. 2016-020	Electric Ball Valve	1

SECTION 2 – PARTS & OPERATION

3.2 – Electric Ball Valve Operation

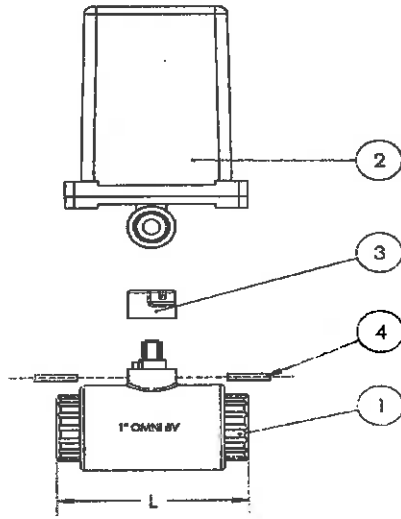
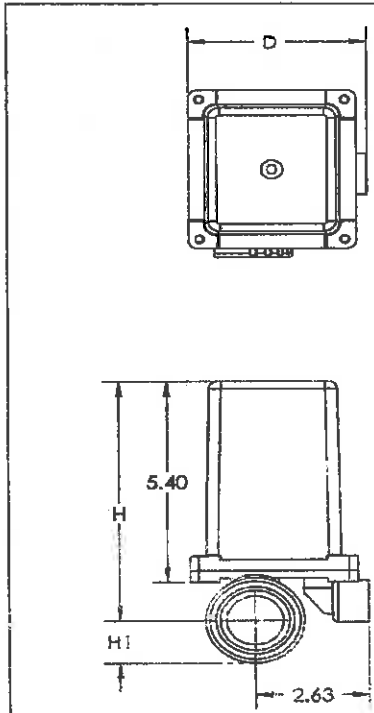
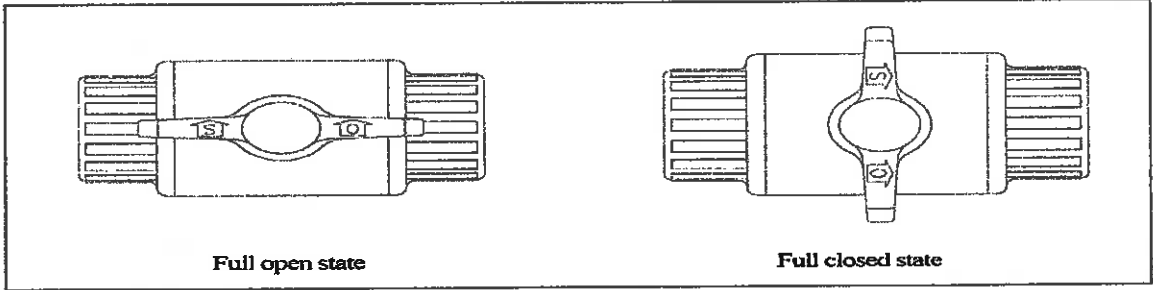
(7) Operating procedure

○ Turn the handle gently to open or close.

(Turn the handle clockwise to close and counter clockwise to open.)

Fully closed The position of the handle should be perpendicular to the pipe.

Fully opened The position of the handle should be parallel to the pipe.



REV	DATE	DESCRIPTION	DR	APPD
A	3/8/10	FIRST ISSUE	CW	DH

SIZE	H1	H	W	D
1/2"	.61	5.93	3.82	4.14
3/4"	.94	6.15	4.06	4.14
1"	1.16	6.35	4.45	4.14
1-1/4"	1.15	6.36	5.00	4.14
1-1/2"	1.45	6.75	5.94	4.14
2"	1.74	7.04	6.97	4.37

ITEM	DESCRIPTION	MATERIAL	QTY
1	OMNI BALL VALVE	PVC, CPVC, PP, PVDF	1
2	ELECTROMINI ACTUATOR	ABS & PVC	1
3	COUPLING	303 STAINLESS STEEL	1
4	ALLEN SET SCREW	STAINLESS STEEL	2

NOTE: The shape and appearance of assembly differ a little with nominal size

UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
MACHINING	2 P. DECIMALS ± .01
TOLERANCES	3 P. DECIMALS ± .005
	ANGULAR ± 1/2°
	FRACTIONAL ± 1/64
FABRICATORS	1/16" - 8" ± 1/4
TOLERANCES:	10" AND UP ± 1/2
	ANGULAR ± 1.0°
MATERIAL:	
FINISH:	N/A

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NAME	DATE
C. Williams	3/8/10
D. Huxley	3/8/10
DR	
APPD	
PROD	
PRODUCT:	
WG/CO#	

ASAHI/AMERICA
 ISO 9001 CERTIFIED
 35 GREEN STREET, 70, 303 & 305, MALDEN, MA.

1/2" THRU 2" OMNI BALL VALVE ELECTROMINI

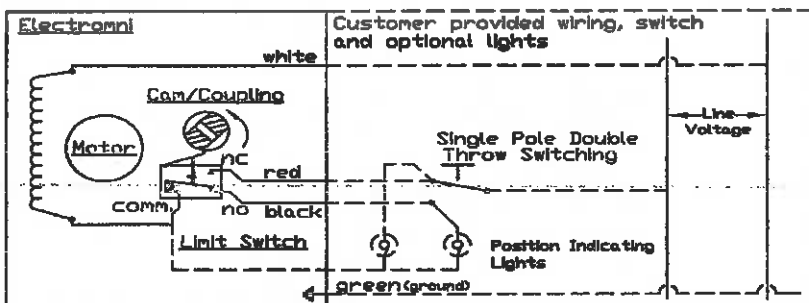
SCALE	1:1	DWG. NO.	G1198V63	REV	A
SHEET	1	OF	1		

3.2 – Electric Ball Valve Operation

REV	DESCRIPTION	DFTG	CHK	DATE
B	INITIAL RELEASE	JJG	KB/DH	9/9/04
C	CHANGES PER ECR# 014-07	JJG	KB	6/19/07

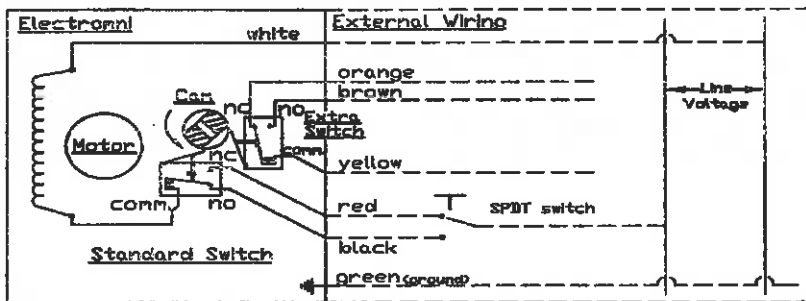
FOR OTHER REVISIONS SEE ECR HISTORY FILE.

WIRING DIAGRAM:



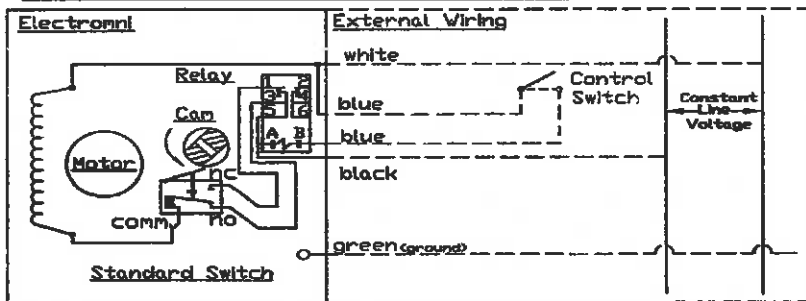
WHITE = NEUTRAL
BLACK = HOT COMMAND OPEN
RED = HOT COMMAND CLOSE
GREEN = GROUND

ELECTROMNI WITH EXTRA LIMIT SWITCH



WHITE = NEUTRAL
BLACK = HOT COMMAND OPEN
RED = HOT COMMAND CLOSE
GREEN = GROUND

ELECTROMNI WITH TWO WIRE CONTROL



CONTROL SWITCH OPERATION
CLOSURE = OPEN COMMAND
NON-CLOSURE = CLOSED COMMAND

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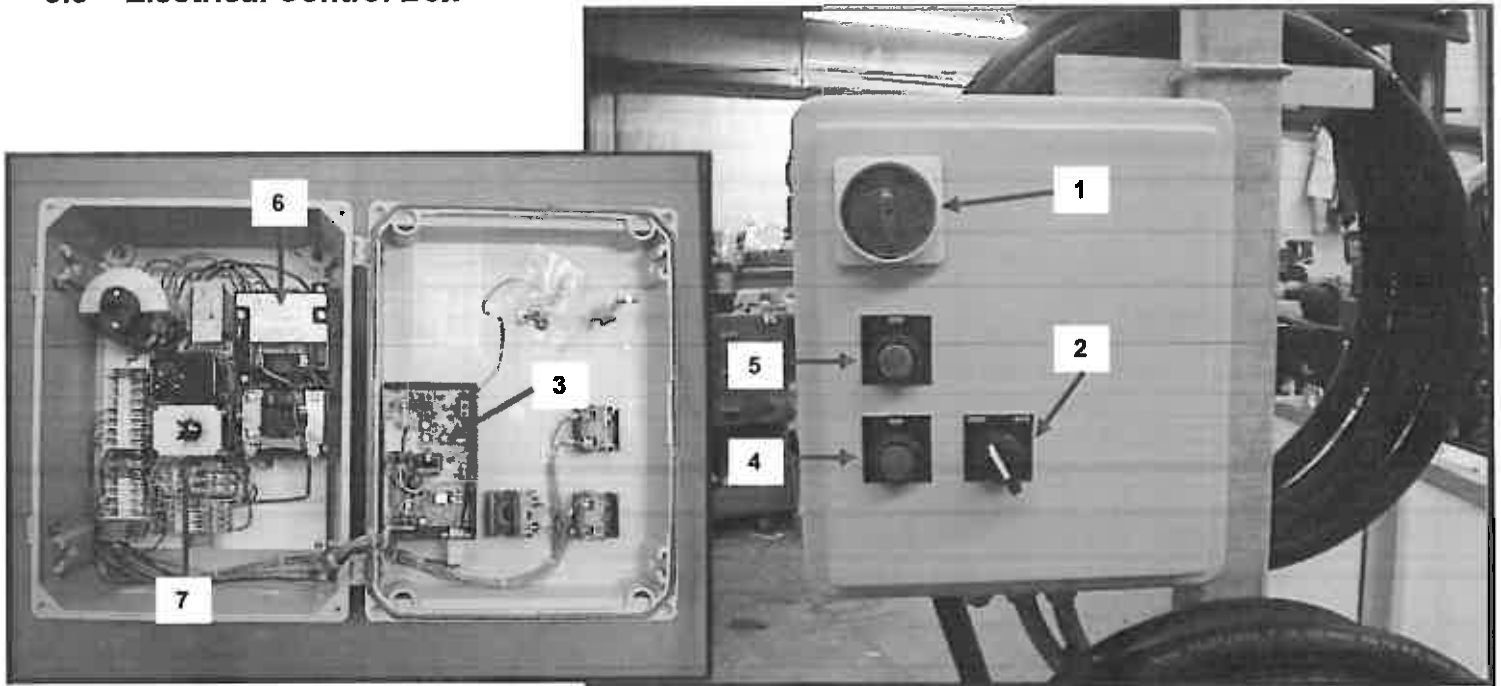
ASAHI/AMERICA
ISO 9001 CERTIFIED
19 GREEN STREET, P.O. BOX 653, MALDEN, MA.



NAME	DATE	WIRING DIAGRAM		
DR JJG	6/19/07	FOR ELECTROMNI 115 & 220 VAC		
CHK K.BLYSTONE	6/19/07	SIZE A	DWG. NO. 0002EL	REV C
APPD		SCALE NTS		SHEET 1 OF 1
PATH		DO NOT SCALE DRAWING		

SECTION 3 – ELECTRICAL

3.3 – Electrical Control Box



	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1.	6A616	DISCONNECT SWITCH (FOR CP-101)	1
2.	SS02-SHWE-NO	SWITCH 2 POSITION MAINTAINED	1
3.	ODR3	RECEIVER BOARD 390 MHZ CP SYS	1
4.	ELEC-RUN/ASM-OO	RUN BUTTON ASSEMBLY COMPLETE	1
5.	ELEC-STP/ASM-OO	STOP BUTTON ASSEMBLY COMPLETE	1
6.	1H490	STARTER SQ-D MAGNETIC MOTOR	1
7.	BR45A6	TIMER 0-60 SEC EAGLE	1

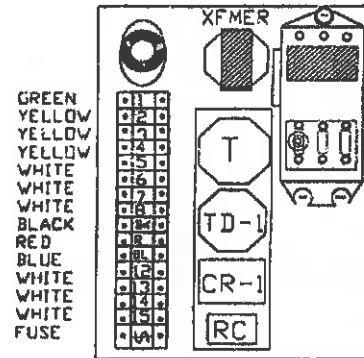
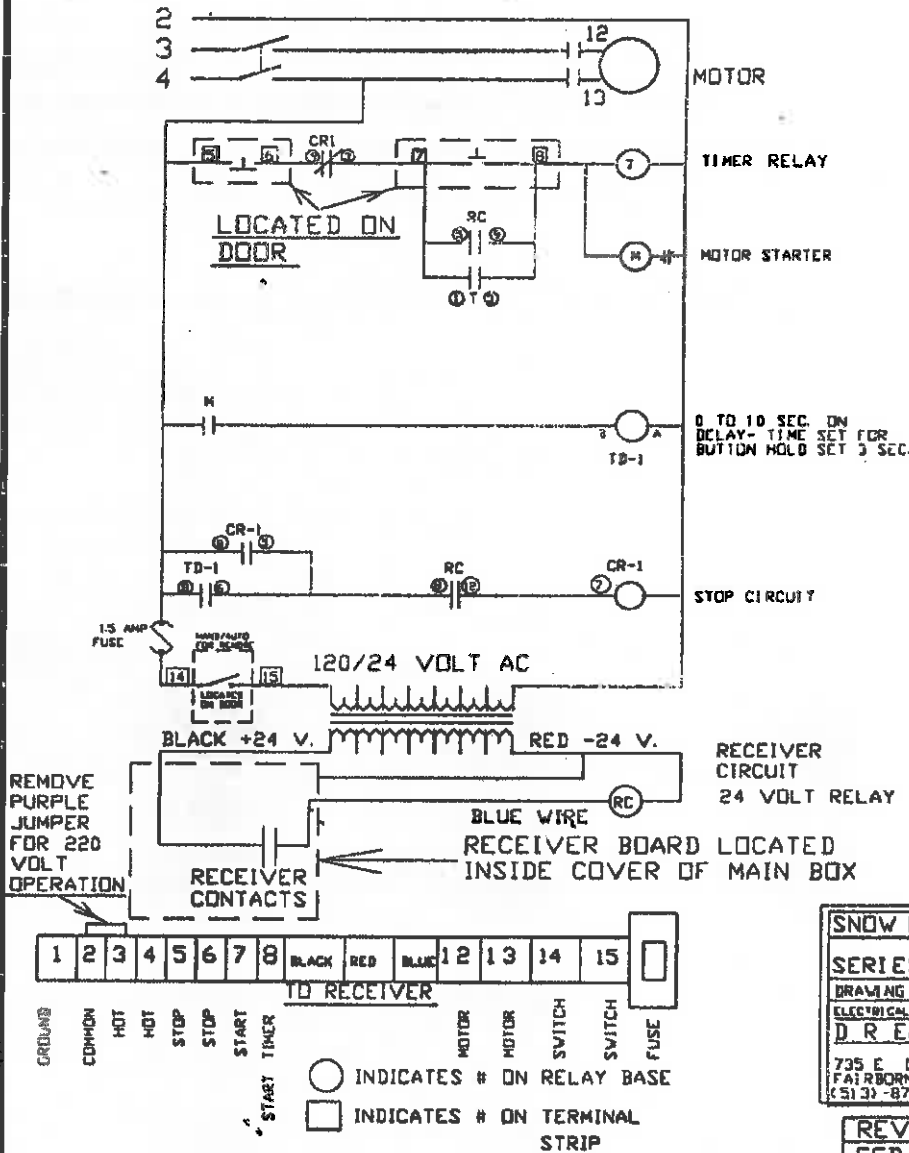
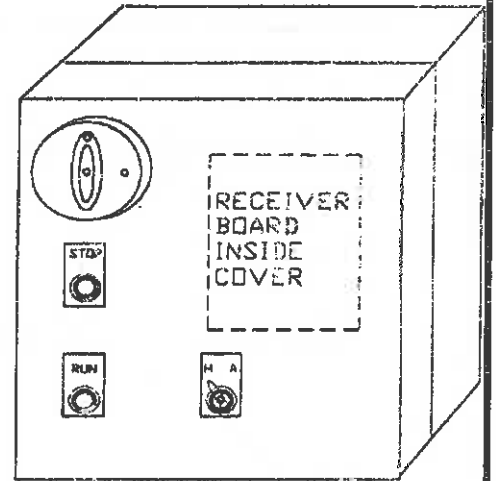
3.4 – Electrical Control Box Operation

SNOW EQUIPMENT SALES, INC.

P. O. BOX 294
 DAYTON, OHIO 45404
 PHONE (513) 224-0902

**CALCIUM CHLORIDE PUMP CONTROL
 WITH 220 VOLT FEED
 WITH HAND/AUTO CONTROL FOR RECEIVER**

Main control box with main disconnect, auto/manual selector switch, run/stop buttons, auto controlled by RC activators, 0-60 second timer in box.



SNOW EQUIPMENT SALES, INC.

SERIES CP50RC

P. O. BOX 294
 DAYTON, OH 45404
 PHONE (513) 224-0902

DRAWING # 013

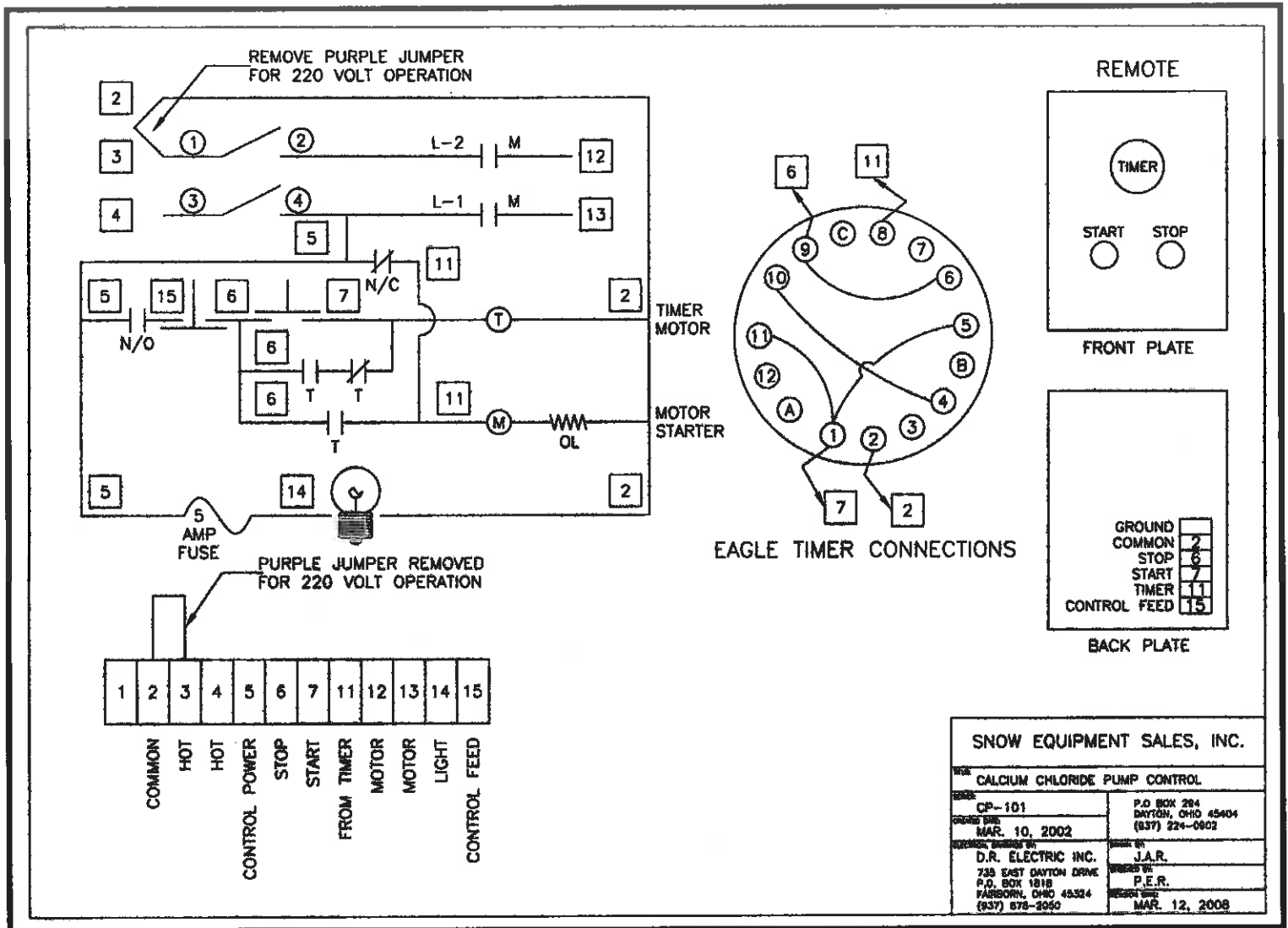
ELECTRICAL DRAWINGS BY
D. R. ELECTRIC INC. E A V \ CAD PRINTS

735 E. DAYTON DRIVE
 FAIRBORN, OHIO
 (513) -878-2050

REVISED
FEB. 3, 1996
NOV. 7, 1996

SECTION 3 – ELECTRICAL

3.4 – Electrical Control Box Operation



3.4 – Electrical Control Box Operation

EAGLE TIMER
MODEL NO. BR45A6

BR 4 SERIES RESET TIMER WIRING AND BASIC SEQUENCE DATA

STANDARD "ON DELAY" CLUTCH

CLUTCH MOTOR	RESET		TIMER		TIMER OUT	
	OFF	OPTIONAL	ON	OFF	ON	OFF
A 9-10	0	X	X	0	X	0
B 9-13	X	0	0	X	0	X
C 6-6	0	X	X	0	X	0
D 6-7	X	0	0	X	0	X
E 4-5	X	0	X	0	0	X
F 4-3	0	X	0	X	0	X
G 11-12	X	0	X	0	0	X
H 11-14	0	0	0	0	0	X

A Timer Control Functions
B Instantaneous Contacts
C Delayed Contacts
D Delayed Opening of Switch 11-12 for
E Timer Motor Cut-off
F Clutch Holding Circuit Release
G Pulse at End of Timing 11-12 in series with 4-3
X = Closed Contact
0 = Open Contact

WIRING DIAGRAMS – External Wiring Shown in Gray

ON DELAY – SUSTAINED CONTROL

Delayed Opening & Closing of Load Circuits
Various Control Circuit Operations obtained by connecting contacts in series

ON DELAY – MOMENTARY CLOSE TO START – RESETS AUTOMATICALLY

Push Button Start Resets at 2-2 Switch Pulse Initiated by 2-2 or 4-3 for 1/2 to 2 1/2 Maximum Set Setting
Use with the circuit switch for end of timing. This feature insures releasing of timer motor winding in time

REVERSE START "0" FEATURE – CLOSE TO RESET – OPEN CONTROL SWITCH TO START

Timer Motor is also self clearing
Various control circuit operations obtained by connecting contacts in series or parallel

BR 4 SERIES

STANDARD AND REVERSE CLUTCH

TERMINAL BLOCK CONNECTIONS AND WIRING TERMINAL BY REAR OF TIMER

SYMBOLS

- ∩ Open or Off
- ∪ Closed or On
- ⊗ Open or Off Momentarily*
- ⊙ Closed or On Momentarily*
- 1/2 1/2 % of maximum dial setting minimum

SEQUENCE CODE

0 X 0
Timer Out
Timing
Reset

Snow Equipment Sales

3.4 – Electrical Control Box Operation

BULLETIN 310

BR4 SERIES
RESET TIMER

SPECIFICATIONS

SYMBOL	RANGE	SYMBOL	RANGE
1	5 Sec	8	60 Sec
2	15 Sec	9	30 Min
4	30 Sec	10	60 Min
5	60 Sec	11	3 Hr
6	150 Sec	12	10 Hr
7	5 Hr		

Voltage/Frequency
105V (±10%), 60 Hz
200V (±10%), 50/60 Hz

Electrical
Power Consumption
Watts — 3 Wp/h
Circuit — 4 VA

Contact Rating
10 Amp, 144V DC VAC
10 Amp, 144V AC VAC
UL Rating — 3 amp @ 120V AC

Reset Time
50 (max) 20 (min)

Repeat Accuracy
±1% of setpoint

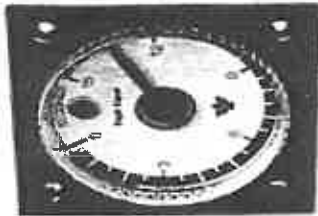
Temperature Range
-75° to +147° F (-55° to +55° C)

DNV Setting
Accuracy ±1%
Maximum 1/2 of ICD Scale

Speed
R.P.M. — 3000
Drop-Out — 4 ms

Laboratory Testing
UL Recognized EMI/RFI
C.S.A. Certificate 16-2067

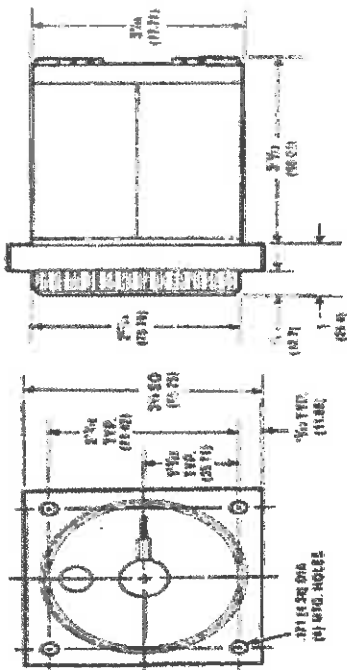
Eagle Signal Controls
A Hawk Industries Company
6300 Center Court, Fort Worth, Texas 76116 U.S.A.



ON delay or REVERSE START timing is achieved through the use of a clutch drive mechanism, usually not available on timers in the BR price category. A new clutch drive mechanism provides a rugged timer reset time and substantially longer motor life. The instantaneous contacts operate directly with the clutch and close instantly when the clutch is energized springing closed until the clutch is de-energized. These instantaneous contacts allow the BR timer to be used in a much greater number of control circuit applications than any other timer in its class.

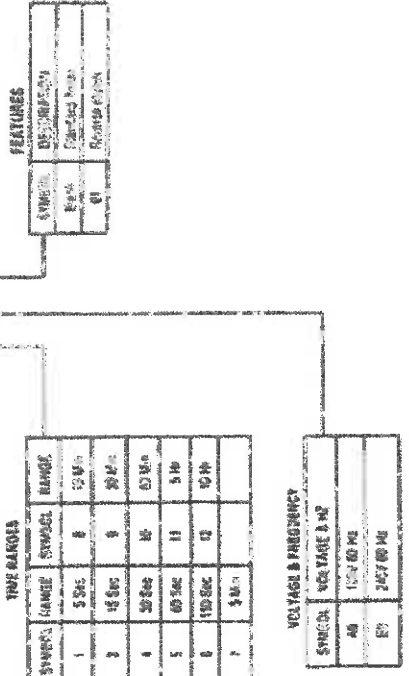
The external wiring is to screw type terminals on the rear of the housing allowing the mechanism to be removed or replaced with a minimum of down time. The BR4 has a 14 terminal housing.

MOUNTING DIMENSIONS



SEE LISTING (PAGE 31)

ORDERING INFORMATION
Specify the quantity of timer units, voltage, and frequency.




SYMBOL	DESCRIPTION
AB	Power Source
BT	Reset Pulse

Circle 38 on Reader Card

3.4 – Electrical Control Box Operation

BULLETIN 118

**BRM SERIES
RESET TIMER**



“ON” relay or “REVERSE START” relay is achieved through the use of a clutch drive mechanism readily available on most BR price category. A rear clutch drive mechanism provides a much faster reset time and substantially longer motor life. The instantaneous clutch operates directly with the clutch and close instantly when the clutch is engaged remaining closed until the clutch is de-engaged. These instantaneous contacts allow the BR timer to be used in a much greater number of control circuit configurations than any other timer in its class.

The electrical wiring is by screw type terminals on the rear of the housing allowing the mechanism to be removed or replaced with a minimum of downtime. The BRM has a 14 terminal housing.

SPECIFICATIONS

TIME RANGE	SYMBOL	RANGE	SYMBOL	RANGE
1	3 Sec	0	13 M/A	13 M/A
2	15 Sec	0	20 M/A	20 M/A
4	30 Sec	10	60 M/A	60 M/A
5	60 Sec	11	5 H	5 H
6	120 Sec	12	10 H	10 H
7	5 Min			

Voltage/Frequency
100-110-120V 50/60 Hz
200V 1-10-100V 50/60 Hz

Electrical
Power Consumption
Motor - 3 Wp
CLC - 4 VA

Contact Rating
10 A @ 120 V AC
10 A @ 240 V AC
UL 500 V - 2 Wp @ 100 AC VAC

Reset Time
500 ms at 120 V AC

Reset Accuracy
± 1 % of setpoint

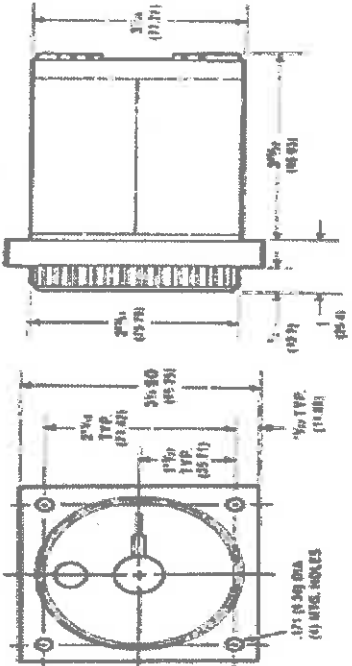
Temperature Range
-20 to +140 F (27 to 40°C)

Dial Setting
Adjustable
Maximum 1/4 of full scale

Speed
Set to 30 rpm
Dial Out 4 rpm

Laboratory Testing
UL Recognized
C.S.A. Certified to C-2007

MOUNTING DIMENSIONS



SEE BULLETIN 10011 for details

ORDERING INFORMATION
Consult Eagle Signal Controls for complete details on voltage, frequency, and temperature

TIME RANGE	SYMBOL	RANGE
1	3 Sec	0
2	15 Sec	0
4	30 Sec	10
5	60 Sec	11
6	120 Sec	12
7	5 Min	

SYMBOL	DESCRIPTION
BRM	Standard Temp Range code

VOLTAGE & FREQUENCY	SYMBOL	VOLTAGE & FREQ
AB	120V 60 Hz	
BT	240V 60 Hz	

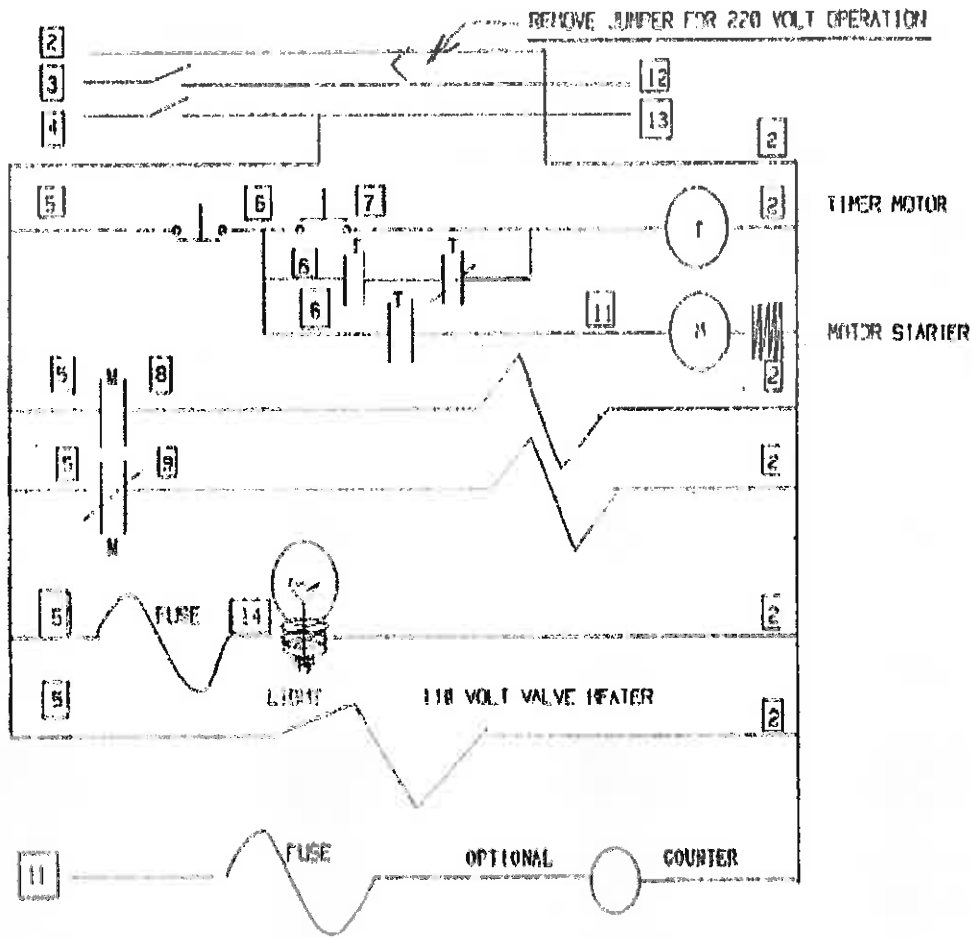
Eagle Signal Controls

Eagle Signal Controls
A Division of Eagle Signal Company
4000 Industrial Park - New York, N.Y. U.S.A.

SECTION 3 – ELECTRICAL

3.4 – Electrical Control Box Operation

CALCIUM CHLORIDE PUMP CONTROL



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
COMMON	HOT	HOT	CONTROL	STOP	START	VALVE OPEN	VALVE CLOSED	FROM TIMER	MOTOR	MOTOR	LIGHT									

3.5 – Night Light

Caretaker™

LED Area Luminaire



Lasts **15** Years*
85% Energy and Maintenance Savings*

Built to Last

- Die-cast aluminum housing
- Thermal cooling fins
- Outdoor wet location rated
- 6kV integral surge protection
- -40°C to 40°C operation
- Maintenance free for up to 15 years

Energy Efficient

- High output energy-efficient LEDs
- Up to 85% energy savings
- NEMA twistlock photocontrol

Replaces up to 175W HID

Ease of Installation

- Hinged, power tray door
- Universal wall and wood pole mount bracket
- Access via single captive screw

Mounting Options (wall and wood pole mount included)



Wall mount Wood pole mount Pipe mount (pipe not included)

Optional Refractors (sold separately)

Small acrylic refractor

ANSI/NEMA acrylic refractor

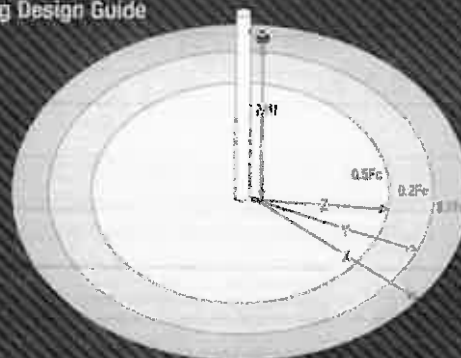


SR-CARETAKER



RMARR0A5

Lighting Design Guide



Mounting Height/Lamp Comparison

Mounting Height	Light Source	X	Y	Z
15'	50W LED Caretaker Area Luminaire	40"	41"	30"
	70W High Pressure Sodium	30"	33"	26"
	175W Mercury Vapor	47"	37"	25"
20'	50W LED Caretaker Area Luminaire	56"	45"	32"
	100W Metal Halide	44"	39"	29"
	100W High Pressure Sodium	52"	43"	33"
25'	50W LED Caretaker Area Luminaire	62"	49"	39"
	100W High Pressure Sodium	57"	47"	32"
	175W Metal Halide	61"	44"	28"

Annualized Energy Savings/Cost Comparison

Wattage/Lamp Type	Life (Hours)	System Wattage	Annual Savings per Fixture	Percent of Savings
50W LED Caretaker Area Luminaire	72,000	50W	\$71.23	81%
70W High Pressure Sodium	16,000	66W		
50W LED Caretaker Area Luminaire	72,000	50W	\$110.32	87%
175W Mercury Vapor	16,000	205W		
50W LED Caretaker Area Luminaire	72,000	50W	\$89.62	85%
100W High Pressure Sodium	16,000	130W		

* Each 35 years based on 1000 hours average use per day. Up to 85% energy and maintenance savings based on energy rate of \$0.12 kilowatt hour, 100 hours per day and the cost of the replacement lamp. Replacement of HID lamps are based on industry standard lifetimes. Subject to change without notice.

Ordering Information

Part Number	Description
CTKRVA	50W LED Caretaker Area Luminaire
SR-CARETAKER	Small Acrylic Refractor Lens
RMARR0A5	ANSI/NEMA Acrylic Refractor Assembly



Scan the QR Code to learn more about the Caretaker LED Area Luminaire.



LUMARK

Cooper Lighting
by **EATON**

ADH131877

www.cooperlighting.com

Cooper Lighting
by **EATON**

3.5 – Night Light

Cooper Lighting
by **FAYATON**

Lumark Caretaker™
LED Area Luminaire
Sheet 1 of 2
IMI-802

INSTALLATION INSTRUCTIONS

IMPORTANT: Read before installing fixture. Retain for future reference.

WARNING: Make certain power is **OFF** before starting installation or attempting any maintenance.



SAFETY: This fixture must be wired in accordance with the National Electrical Code and applicable local codes and ordinances. Proper grounding is required to insure personal safety. Carefully observe grounding procedure under installation section.

WARNING: Make certain power is OFF before starting installation or attempting any maintenance. Risk of fire/electric shock. If not qualified, consult an electrician.

- **RISK OF ELECTRIC SHOCK**—Disconnect power at fuse or circuit breaker before installing or servicing.
- **RISK OF BURN**—Disconnect power and allow fixture to cool before servicing.
- **RISK OF PERSONAL INJURY**— Fixture may become damaged and/or unstable if not installed properly. Tighten all fixture components to their recommended torque values. Do not lift pole into place by securing lifting device to lighting fixture or mounting arm.

WALL/POLE MOUNT BRACKET

TOOL REQUIRED: 7/16" Socket wrench, drill, 3/16" drill bit.

1. Remove wall/pole mount bracket from fixture and set aside two 5/16"-18" fixture mounting bolts. Discard pipe-clamp bracket.
2. Determine mounting surface.
 - **Wall Mount:** Place bracket (wall/sq pole mount) face against mounting surface, with bracket arrow pointing up. (FIG. 1)
 - **Wood Pole Mount:** Place bracket (wood pole mount) face against pole with bracket arrow pointing up. (FIG. 2)
3. Make sure bracket is level. Drill \varnothing 3/16" pilot holes. Drive four 1/4" x 2" long lag bolts (provided) where indicated. Tighten bolts to approx. 6-8 ft-lbs.

NOTE: DO NOT USE "FIXTURE" MOUNTING HOLES TO FASTEN BRACKET TO MOUNTING SURFACE.

LUMINAIRE INSTALLATION

TOOLS REQUIRED: 1/2" Socket wrench.

WALL/POLE MOUNT BRACKET (FIG. 3 and 4)

1. With supply wires pulled through either 1/2" conduit hole 6" to 8", slide fixture down over bracket and ensure support tab is correctly positioned inside the housing wall cavity.
2. Using 1/2" socket, drive the two pipe-clamp mounting bolts up through universal bracket and into luminaire's threaded bolt holes. Tighten to 14-16 ft-lbs.

PIPE ARM (FIG. 5)

1. Use a 1/2" socket to remove the two 5/16"-18 pipe-clamp mounting bolts and remove and discard wall/pole mount bracket.
2. Re-attach pipe-arm bracket leaving enough space to allow mounting arm to slide onto desired leveling step.
3. With supply wires pulled through mounting pipe 6" to 8", tighten the two pipe-clamp mounting bolts using 1/2" socket to 14-16 ft-lbs.

WIRING

TOOLS REQUIRED: Philips or flathead screwdriver.

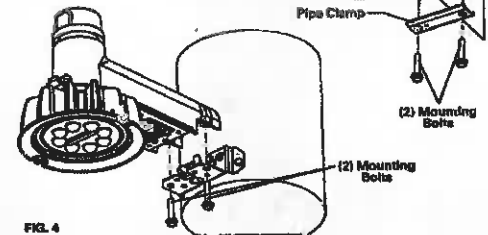
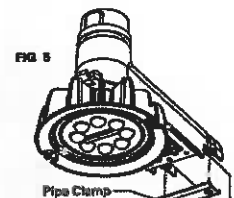
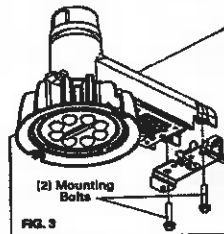
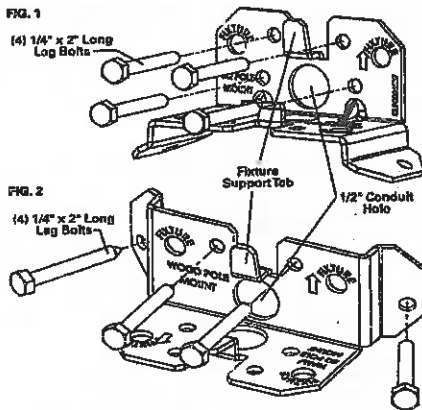
NOTE: ALL WIRING TO BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES AND ORDINANCES

1. Open fixture using screw driver and allow access door to hang from hinge. (FIG. 6)
2. Pull supply wires into fixture housing and connect ground service wire to green factory installed wire. Connect line service lead (hot wire) to black factory installed wire. Connect neutral service wire to white factory installed wire.

NOTE: SEE WIRING DIAGRAM FOR ADDITIONAL DETAILS (FIG. 7)

These instructions do not claim to cover all details or variations in the equipment, procedure, or process described, nor to provide directions for meeting every possible contingency during installation, operation or maintenance. When additional information is desired to satisfy a problem not covered sufficiently for user's purpose, please contact your nearest representative. NOTE: Specifications and dimensions subject to change without notice.

Eaton's Cooper Lighting Division
1121 Highway 74 South, Peachtree City, GA 30289



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www.cooperlighting.com

Section 4 – Service and Maintenance

Section 4 – Service and Maintenance

Maintenance Recommendations.....4.1

Operator's Notes/Memos.....4.2

Order Form.....4.3

4.1 – Maintenance Recommendations

**MAINTENANCE RECOMMENDATIONS
CALCOTE PEDESTAL
ALL MODELS**

The quality components which make up the CALCOTE PEDESTAL result in high reliability and low maintenance. As with any equipment used on a seasonal basis, it is sound practice to check the unit thoroughly prior to its intended use.

The following components should be checked and serviced to insure a trouble free season of use:

1. PUMP/MOTOR:

Pump/motor connecting shaft should rotate freely when turned by hand. Use small pipe wrench or pliers to loosen if shaft becomes stuck during off season. If the shaft can not be turned easily using hand tools the pump must be disassembled and inspected to determine problem. The pump and motor bearing have been factory lubricated and do not require annual service.

During the off season the pump motor should be operated for 20-30 second each month. This will prevent the pump shaft from binding due to lack of use and also prevent the pump from becoming air locked. By closing the valve at the storage tank outlet no chloride will be lost during this operation.

If the pump should become air locked, indicated when the pump motor runs and the shaft turns, but material does not flow from the spray head, then remove a drain plug from the pump case and allow chloride to flood the pump case.

2. ELECTRICAL CONTROLS:

Check "Run", "Stop" buttons on remote control box for proper operation.

Timer should be checked with stop watch for proper calibration.

3. NIGHT LIGHT:

The night light can be checked by covering the photo electric "eye". Bulbs or fuses are easily replaced if necessary.

4. WINCH:

For continued smooth performance and increased life, occasional greasing of gears and reel shafts and an occasional drop of oil on drive shaft bearings is recommended. The winch finish can be protected and will provide longer service if it is periodically washed with water and then wiped with light oil.

4.1 – Maintenance Recommendations Continued**5. PLUMBING:**

All plumbing fittings from the tank to the pedestal should be checked for leaks. All valves should be checked for proper operation.

6. BEARING SLEEVES:

The two bearing sleeves which attach the spray arm to the pedestal main body should be checked for adequate lubrication. Use light weight grease if additional lubrication is necessary.

NOTE:

It is recommended that the system be inspected thoroughly before the winter season. Use this opportunity to order the spare parts that will be required to maintain you system in the future. Remember, down time can be costly.

Please notify Snow Equipment Sales of any problems you encounter with your CALCOTE PEDESTAL.

4.3 – Order Form

ORDER FORM

Snow Equipment Sales
 224 East King St.
 East Berlin, PA 17316
 800-458-5123
 717-259-1577
 Fax # 717-259-1588

Bill To: _____

Fax # _____
 Date Order _____

Ship To: _____

Needed By Date _____

Item	Qty	Part Number	Description	Unit Price	Total Price
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Shipping And Payment Method (Required)

Shipping Method _____ Total _____

- Invoice Our Account P.O. No _____
- Payment Method (check one)

VISA _____

MasterCard _____

Account Number # _____

Expiration Date (Required) _____

Signature _____

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application is hereby made for Preference in accordance with **West Virginia Code, §5A-3-37**. (Does not apply to construction contracts). **West Virginia Code, §5A-3-37**, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

- 1. **Application is made for 2.5% vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification;
 Bidder is a resident vendor partnership, association, or corporation with at least eighty percent of ownership interest of bidder held by another entity that meets the applicable four year residency requirement; or,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
- 2. **Application is made for 2.5% vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
- 3. **Application is made for 2.5% vendor preference for the reason checked:**
 Bidder is a nonresident vendor that employs a minimum of one hundred state residents, or a nonresident vendor which has an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia and employs a minimum of one hundred state residents, and for purposes of producing or distributing the commodities or completing the project which is the subject of the bidder's bid and continuously over the entire term of the project, on average at least seventy-five percent of the bidder's employees or the bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years and the vendor's bid; or,
- 4. **Application is made for 5% vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
- 5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
- 6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
- 7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.**
 Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) rescind the contract or purchase order; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: GVM, INC.
Date: 8/31/2016

Signed: *Thomas Rau*
Title: VICE PRESIDENT

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

STATE OF WEST VIRGINIA
Purchasing Division
PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: GVM, INC.
Authorized Signature: Thomas Bain Vice President Date: 8/26/2016

State of Pennsylvania
County of Adams, to-wit:

Taken, subscribed, and sworn to before me this 26th day of August, 2016.
My Commission expires January 22, 2016.

AFFIX SEAL HERE

NOTARY PUBLIC Sally A. Bish
Purchasing Affidavit (Revised 08/01/2015)

