



CITY OF O'FALLON, MISSOURI

PURCHASING DEPARTMENT

100 North Main Street

O'Fallon, MO 63366

T: (636) 379-5527

FURNISH AND DELIVER BID

| | | | |
|--------------------|---|--------------------|---------------|
| INVITATION TO BID: | 23-071 | BID ISSUE DATE: | 09/01/2023 |
| BID DESCRIPTION: | SPARE SUBMERSIBLE PUMPS FOR LIFT STATIONS | | |
| BID OPENING DATE: | 09/14/2023 | BID OPENING TIME: | 2:15 P.M. CDT |
| COPIES REQUIRED: | 1 ORIGINAL | BID BOND REQUIRED: | NO |

BID RESPONSES MUST BE RECEIVED AND TIME STAMPED NO LATER THAN THE PUBLIC BID OPENING DATE AND TIME (LOCAL TIME) SPECIFIED ABOVE. BIDS WILL BE OPENED AND READ ALOUD AT THAT TIME IN THE COUNCILMEN'S CONFERENCE ROOM ON THE FIRST FLOOR OF THE MUNICIPAL CENTER. LATE BIDS WILL NOT BE OPENED OR CONSIDERED.

TO ALL PROSPECTIVE BIDDERS:

You are hereby invited to submit your bid for the item(s) to be furnished and delivered, shipped F.O.B. delivered, to the address specified herein on the forms supplied. **Do not staple or submit bid in any type of binder**; binder clips are acceptable.

The original bid, along with the bid bond (if applicable), must be received in a sealed envelope that has your company name and address in the upper left corner and the attached label filled in and pasted on the lower left corner.

All bids are subject to staff analysis. The City of O'Fallon, Missouri reserves the right to accept or reject any and all bids received and waive any and all irregularities.

| | | |
|---|---------------------------------------|--|
| QUESTIONS SHOULD BE SUBMITTED IN WRITING VIA E-MAIL BY 12:00 P.M. on 09/08/2023 TO THE PURCHASING AGENT. QUESTIONS WILL ONLY BE ANSWERED VIA ADDENDUM BY END OF DAY ON 09/11/2023. Addendum information is available over the Internet at www.ofallon.mo.us . We strongly suggest that you check for any addenda a minimum forty-eight hours (48) in advance of the bid deadline. | PURCHASING AGENT: CHRISTINE GRABIN | |
| | PHONE: E-MAIL: | 636.379.5527 cgrabin@ofallon.mo.us |

| | |
|--|---|
| BIDS MUST BE DELIVERED AND TIME STAMPED, PRIOR TO THE PUBLIC BID OPENING DATE AND TIME, TO: | CITY OF O'FALLON ATTN: CHRISTINE GRABIN, PURCHASING AGENT 100 NORTH MAIN STREET O'FALLON, MO 63366 |
|--|---|

| | |
|---------------------|--|
| FULL NAME OF BIDDER | |
| BID CONTACT PERSON | |
| TELEPHONE NUMBER | |

FACSIMILE AND/OR E-MAIL TRANSMITTED BIDS WILL NOT BE ACCEPTED

CITY OF O'FALLON, MISSOURI

INSTRUCTIONS TO BIDDERS

BID REQUIREMENTS:

The City of O'Fallon, Missouri (the "City") **requires** all bids be submitted on the blank bid form furnished with these contract documents and shall conform to the terms and conditions set forth in the "Instructions to Bidders", "General Conditions" and "Special Conditions" of the contract. Please make and retain a copy of this bid for your records. The bid must be enclosed in a sealed envelope bearing the bid number and the printed title of the bid. Bidders must sign, in ink, the bid form and all other documents where indicated.

Where applicable, the Bidder shall furnish with the bid, one set of all available literature pertaining to the equipment and/or material to be furnished under the bid.

Bidder shall acknowledge receipt of each addendum issued in the space provided on the bid form.

The total price quoted by the Bidder must be the total cost delivered to the location(s) stated in the "Special Conditions" or "Specifications". Bidder must not qualify his bid by stating a F.O.B. location other than such stated location(s).

In the specifications, whenever an article or material is defined by brand name, the name and catalog number of a particular manufacturer, vendor or a limited description, the term "OR APPROVED EQUAL" is written. Any reference to a particular manufacturer's product either by brand name or limited description is only for purposes of setting a standard of performance, quality, composition, construction or size. If there is any deviation in the pack, source, quality, etc., of an item bid, from that prescribed in the specifications, the appropriate line in the specifications will be ruled out and the substitution clearly indicated.

However, if "OR APPROVED EQUAL" is not written and you cannot bid the specified item, the Bidder may submit an alternate bid. The City will consider the bids covering the specified article or material first.

The City, for cost effective measures, standardizes on specific items; those bids will contain the language "no substitution," and any alternative will not be considered.

ALTERNATE/EQUAL BIDS:

The City recognizes the expertise provided by many bidders and encourages creativity in bidding. Alternates may be considered if the bid submitted clearly indicates what will be furnished and how it will benefit the City. Alternates will be compared to the lowest responsive, responsible bid as specified.

The City reserves the right to approve any material the Bidder proposes to furnish which contains variations from specification requirements, but which may substantially comply.

BONDS:

No bonds are required to be submitted with this bid.

CONTRACT AWARD INFORMATION:

Award notification will be sent to the vendor receiving the award via mail or fax.

Response summaries will be available at www.ofallon.mo.us under Bid Opportunities. This summary of information will include bids that were delivered by the required bid opening date and time.

CITY OF O'FALLON, MISSOURI

CONTRACT DOCUMENT COMPONENT PARTS:

The contract documents herein named include all of the following component parts, all of which are fully a part of this contract as if herein set out verbatim, or, if not attached, as if hereto attached.

- 1) Instructions to Bidders
- 2) General Conditions
- 3) Special Conditions
- 4) Bid Form
- 5) References
- 6) Specifications
- 7) Pricing/Signatures
- 8) Any and all addenda to the foregoing

All documents are or will be on file in the office of the City Clerk, City of O'Fallon, MO, 100 North Main, O'Fallon, MO 63366.

DEVIATIONS AND EXCEPTIONS:

Deviations and exceptions shall be described fully, on the Bidder's letterhead, signed, and attached to the Bid Form. In the absence of such statement, the bid shall be considered as if submitted in strict compliance with all terms, conditions, and specifications; the Bidder shall be held liable. Bidders are cautioned to avoid making deviations and exceptions to the specifications, which may result in rejection of their bid.

EXAMINATION BY BIDDER:

The Bidder shall, before submitting his bid, carefully examine the bid, specifications and contract documents.

If his bid is accepted, he will be responsible for all errors in his bid resulting from his failure or neglect to comply with these instructions.

Unless otherwise provided in the SPECIAL CONDITIONS, when the specifications include information pertaining to preliminary investigations made by the City, such information represents only the opinion of the City as to the location, character or quantity of the materials encountered. That information is only included for the convenience of the Contractor. The City assumes no responsibility whatsoever with respect to the sufficiency or accuracy of the information.

FACSIMILE/E-MAIL TRANSMITTALS:

Facsimile and/or e-mail transmitted bids will not be accepted by the City.

INDEMNITY:

The Contractor shall, at all times, fully indemnify, hold harmless, and defend the City and its officers, members, agents, and employees from and against any and all claims and demands, actions, causes of action, and cost and fees of any character whatsoever made by anyone whomsoever on account of or in any way growing out of the performance of this contract by the Contractor and its employees, or because of any act or omission, neglect or misconduct of the Contractor, its employees and agents or its subcontractors including, but not limited to, any claims that may be made by the employees themselves for injuries to their person or property or otherwise.

Such indemnity shall not be limited by reason of the enumeration of any insurance coverage herein provided.

Nothing contained herein shall be construed as prohibiting the City, its directors, officers, agents, or its employees, from defending through the selection and use of their own agents, attorneys and experts, any claims, actions or suits brought against them.

The Contractor shall likewise be liable for the cost, fees and expenses incurred in the City's or the Contractor's defense of any such claims, actions, or suits.

CITY OF O'FALLON, MISSOURI

INTERPRETATION OF CONTRACT DOCUMENTS:

If a potential Bidder is uncertain as to the meaning of any part of the specifications or other contract documents, the bidder is expected to submit questions to the Purchasing Agent. The Purchasing Agent is the point of contact for this bid. All communications regarding this bid packet must be directed to the Purchasing Agent. All contact with the City should be channeled through the Purchasing Agent. No contact with other City employees, officials, or City Council members is to be made by responding proposers throughout the entire process.

If a question can be answered by directing the questioner to a specific section of the bid packet, then the Purchasing Agent may answer the question over the telephone. Other questions may be more complex and may require a written amendment to the specifications. The Purchasing Agent will make this determination. Oral communication is considered unofficial and non-binding on the City. If an amendment to the specifications is issued, it will be provided to all offerors that were issued a copy of the bid packet and to those that have requested a copy of the bid packet from the Purchasing Agent.

Christine Grabin, Purchasing Agent
E-mail: cgrabin@ofallon.mo.us

Only questions answered by formal written addenda will be binding. Oral and interpretations or clarifications will be without legal affect.

PREPARATION OF BIDS:

The Bidder shall return his bid on the attached bid forms. **Bids must be returned with all pages intact.** Please make and retain a copy of this bid for your records. Unless otherwise stated, all blank spaces on the bid page or pages, applicable to the subject specification, shall be correctly filled in. Either a unit price or a lump sum price, or both as the case may be, shall be stated for each and every item, either typed in or printed in ink, in figures, and if required in words. Bidder shall acknowledge receipt of each addendum issued in the space provided on the bid form.

All prices quoted by the Bidder shall be F.O.B. delivered and shall include any and all freight costs to the delivery location(s) specified. The Bidder must not qualify the bid by stating F.O.B. a location other than such stated location(s).

When a bid consists of a number of items, prices must be submitted for all items, unless otherwise directed in the Special Conditions.

Where unit prices are to be bid, and/or where bids are to be made on more than one item, the Bidder shall extend the unit price(s) bid in the places provided on the pricing pages for the approximate quantities, shall compute the total amount of the bid and shall indicate same on the bid page. The Bidder must bid in accordance with the unit(s) of measure called for. If an item is listed by each, the bid price must be entered by each, not dozen or hundred. All extensions and total sums are subject to verification by the City and the correct extensions and sums will be used in the comparison of bids.

Where unit prices are requested, the quantities stated are approximate only. The quantities for all items on which bids are to be received on a unit price basis, will not be used in establishing final payment due the Contractor. Bids will be compared on the basis of number of units stated in the Bid Pricing Section. Contract payment for unit price items will be based on the actual number of units installed in the completed work within the proposed scope of work.

All extensions and total sums are subject to verification by the City and the correct extensions and sums will be used in the comparison of bids. If a discrepancy exists between the unit prices and totals, the unit prices shall prevail. If a discrepancy exists between the total base bid and the true sum of the individual bid items, the true sum shall prevail.

In certain cases, amounts are to be shown in both words and figures. When discrepancies occur between the "Written in Words" and the "In Figures" amounts for the total lump sum bid amount, the "Written in Words" shall govern.

CITY OF O'FALLON, MISSOURI

Bidders are warned against making any erasures or alterations of any kind, and bids, that contain omissions, erasures, conditions, alterations, or additions not called for may be rejected. The bidder must fill in all blanks. Use "N/A" or "None" where applicable.

The bid shall be signed by a company officer empowered to bind the company. Failure to sign the bid may cause the bid to be determined to be non-responsive and the bid may be rejected.

SUBMISSION OF BIDS:

All bids must be received in sealed envelopes that have your name and address in the UPPER left corner and the attached label filled in and pasted on the LOWER left corner.

Bids mailed "EXPRESS MAIL" must have bid number and due date on the outside of the EXPRESS MAIL envelope.

The Bidder shall be responsible for delivery of bids to the Purchasing Agent before the date and hour set for the opening of bids. The City assumes no responsibility for delays caused by any delivery service. Postmarking by due date will not substitute for actual receipt by the City. Late bids will not be opened or considered.

END OF INSTRUCTIONS TO BIDDERS

GENERAL CONDITIONS

ADDENDUM AND SUPPLEMENT TO REQUEST:

If it becomes necessary to revise any part of this request or if additional data is necessary to enable the exact interpretation of provisions of this request, revisions will be provided in the form of an Addendum. If revisions are necessary after any mandatory Pre-Bid conference, the revisions will be provided only to those Contractors who will have attended the Pre-Bid conference.

CHANGES:

All changes to this Bid Document shall be amended in written form (Addenda). The Purchasing Agent prior to the scheduled bid opening shall issue such amendments.

The City reserves the right to make any desired change in the specifications after the same shall have been put under contract; but the change so made, with the price to be added or deducted from the contract price, therefore, shall be agreed upon in advance between City and the successful Contractor.

The City shall issue to the successful Contractor a written change order to the original contract; such change orders shall be binding upon both parties thereto and shall in no way invalidate or make void the terms of the original contract not modified by such change.

No claim based on oral changes will be allowed.

CONTRACTOR PERFORMANCE:

The Instructions to Bidders, Bid Form, General Conditions, Special Conditions, contract specifications and attached exhibits shall together constitute the Contract. The Contractor hereby asserts that it has read the specifications, and that it is thoroughly informed and familiar as to their contents and requirements. All items shall be supplied in strict accordance with the specifications. The Contractor's performance under the terms of this Contract shall be to the satisfaction of the City.

DISCLAIMER:

RESERVED BY OWNER

The City reserves the right to reject any or all bids failing to meet the City's specifications or requirements and to waive technicalities. If in the City's opinion, the lowest bid is not the most responsible bid, considering value received for monies expended, the right is reserved to make awards as determined solely by the judgment of the City. In determining the lowest responsible bidder, the City shall take into consideration the qualities of the articles supplied, their conformity with the specifications, and their suitability to the requirements of the City and the delivery terms. Intangible factors, such as the Contractor's reputation and past performance, will also be weighed.

The Contractor's failure to meet the mandatory requirements will result in the disqualification of the Contractor's bid from further considerations.

The City further reserves the right to reject all bids and obtain goods or services through intergovernmental or cooperative agreements.

Submission of a bid confers no rights on the Contractor to a selection or to a subsequent contract. This Invitation to Bid process is for the City's benefit only and is intended to provide the City with competitive information to assist in selection of services. All decisions on compliance, evaluation, terms and conditions shall be made solely at the City's discretion and shall be made to favor the City.

DRUG FREE WORKPLACE:

The Contractor (whether an individual or company) agrees to provide a drug free workplace.

ENDORSEMENTS:

Contractor shall not use the City in any form of endorsement to any third-party without the Buyer's written permission.

CITY OF O'FALLON, MISSOURI

EXECUTION OF CONTRACT:

The bidder to whom the contract has been awarded shall sign one (1) copy of the contract and return it to the City within seven (7) calendar days after receipt of the contract. Failure to execute the contract and return it to the City within seven (7) calendar days after receipt of the contract shall be cause for the annulment of the contract award and the forfeiture of the bid security to the City.

If circumstances beyond the Contractor's control prohibit a timely execution of this contract, prior written approval must be requested by the Contractor and receive approval from the City for an extension to the delivery date.

SAFETY DATA SHEETS:

If applicable, Contractor shall furnish and submit, to the City, Safety Data Sheets for their products upon award of Contract.

F.O.B.:

All goods are to be shipped prepaid, F.O.B. destination. Shipments sent C.O.D. without City's written consent will not be accepted and will at Contractor's risk and expense, be returned to Contractor. Unauthorized shipments are subject to rejection and return at Contractor's expense.

HOLDING OF BIDS:

Contractor may withdraw their bids at any time prior to the time specified as the closing time for the receipt of bids. However, no Contractor shall withdraw or cancel his bid for a period of ninety (90) calendar days after said closing time for the receipt of bids.

LAW GOVERNING:

All State of Missouri and/or Federal Laws shall be hereby specifically made a part of this contract as set forth herein.

LIENS, CLAIMS, AND ENCUMBRANCES:

Contractor warrants and represents that all the goods and materials ordered herein are free and clear of all liens, claims, or encumbrances of any kind.

MISCELLANEOUS REQUIREMENTS:

The City will not be responsible for any expenses incurred by the Contractor in preparing and submitting a Bid. All Bids shall provide a straightforward, concise delineation of your capabilities to satisfy the requirements of this request. Emphasis should be on completeness and clarity of content.

The Contractor is prohibited from assigning, transferring, conveying, subletting, or otherwise disposing of this agreement or its rights, title of interest therein or its power to execute such agreement to any other person, company or corporation without the previous consent and approval in writing by the City.

NON-DISCRIMINATING:

The Contractor, its employees and subcontractors, agree not to commit unlawful discrimination and agree to comply with applicable provisions of the, the U.S. Civil Rights Act and Section 504 of the Federal Rehabilitation Act, and rules applicable to each.

Firm shall comply with Section 285.525 – 285.550 RSMo regarding enrollment in a federal work authorization program. **A signed, notarized affidavit (attached) and supporting documentation affirming enrollment in a federal work authorization program must be submitted with proposal. Failure to comply with this provision may result in rejection of proposal.**

E-VERIFY:

Company shall be E-verify compliant and shall provide documentation to support this requirement within the proposal including the memorandum of understanding (MOU) and the electronic signature page completed in its entirety.

NON-EXCLUSIVITY:

Nothing herein is intended nor shall be construed as creating any exclusive arrangement with Vendor.

CITY OF O'FALLON, MISSOURI

PATENTS:

Contractor undertakes and agrees to defend at Contractor's own expense, all suits, actions, or proceedings against buyer, in which City, and of Contractor's suppliers, contractors, distributors or dealers, or the users of any of Contractor's products are made defendants for actual or alleged infringement of any U.S. or foreign letters patent resulting from the use or sale of the items purchased hereunder. Contractor shall inform the City whenever infringement will result from Contractor's adherence to specifications supplied by the City or by an authorized City Representative. Contractor further agrees to pay and discharge any and all judgments or decrees, which may be rendered in any such suit, action or proceedings against City therein.

PAYMENT:

The goal of the City is to pay properly submitted Contractor invoices within thirty (30) days of receipt, providing goods have been delivered, approved, and accepted by an authorized City Representative. Original invoices must be presented for payment in accordance with instructions contained on the Purchase Order including reference to Purchase Order number and submitted to the correct address for processing.

TAX:

The City is not responsible for and will not pay local, Federal Excise Tax or Missouri Sales Tax. A copy of the exemption letter is available upon written request.

TERMS/CANCELLATION AND DAMAGES:

This contract may be terminated by either or both parties upon thirty (30) days written notice or upon mutual agreement of both parties.

If the City because of the Contractor's breach terminates this Contract, the City shall have the right to purchase equipment elsewhere and to charge the Contractor with any additional cost incurred.

Notwithstanding the above, the Contractor shall not be relieved of any liability to the City for damages sustained by the City by virtue of any breach of this contract by the Contractor and the City may withhold any payments to the Contractor until such time as the amount of such damages due the City from the Contractor shall be determined.

TRANSFER OF OWNERSHIP OR ASSIGNMENT:

The terms and conditions of this contract shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

Prior to any sales or assignments, the City must be notified and approve same in writing. The City shall have right of first refusal.

END OF GENERAL CONDITIONS

SPECIAL CONDITIONS

DELIVERY REQUIREMENTS:

In this contract, time is of the essence. All freight and delivery charges are to be included in the costs entered on the bid pricing page. Under no circumstances will the City be liable for additional delivery charges.

The successful bidder's performance under the terms and conditions of this contract shall be satisfactory to the City.

All deliveries shall be made between the hours of 8:00 a.m. and 3:00 p.m. unless other arrangements have been made.

PRICING:

The pricing stated by the bidder in the bid documents shall remain firm for a one (1) year period from the start date of the contract. No price increases will be allowed for the duration of the contract. Price decreases are allowed at any time.

END OF SPECIAL CONDITIONS

INSURANCE REQUIREMENTS

GENERAL:

The Vendor shall respond to these specifications as an independent contractor and not as an employee of the City of O'Fallon. An original Certificate of Insurance from the company or authorized agent of record must be furnished to the City, provide that the City of O'Fallon is an "Additional Insured" on the Vendor's Commercial General Liability policy during the Term of the Agreement, and a copy of such "Additional Insured" endorsement must accompany the insurance certificate. This requirement of insurance does not limit the Vendor's liability under the Agreement in any manner.

WORKER'S COMPENSATION INSURANCE:

The Vendor shall procure and shall maintain during the Term of the Agreement, Worker's Compensation Insurance for all of its employees to be engaged and perform work under the Agreement, and in case such work is sublet, the Concessionaire shall require the subcontractor similarly to provide Worker's Compensation Insurance for all such employees to be engaged by the Vendor for such work unless such employees are covered by the protection afforded by the Vendor's Worker's Compensation Insurance. In the event any class of employees engaged in hazardous work under the Agreement is not protected under the Worker's Compensation statute, the Vendor shall provide and shall cause such subcontractor to provide adequate Employer's Liability insurance for the protection of its employees not otherwise protected.

Commercial General Liability Insurance:

The Vendor shall carry public and property damage insurance which shall include bodily injury and accidental death to any person and subject at the minimum limits set forth below:

| | |
|------------------|---|
| Liability Limits | \$1,000,000/Per Occurrence |
| | \$3,000,000/General Aggregate |
| | \$3,000,000 Products/Completed Operations aggregate |
| | Additional Insured status must be provided to the City and confirmed by copy of such endorsement. |
| | An umbrella/excess liability policy can be used to attain the required limits. |

Commercial Automobile Liability Insurance:

The Vendor shall maintain Commercial Automobile Liability Insurance Coverage in the amounts not less than the minimum limits set forth below:

| | |
|-----------------------------------|--|
| Bodily Injury and Property Damage | \$3,000,000 Combined Single Liability Limit |
| | An umbrella/excess liability policy can be used to attain the required limits. |

CHANGES IN INSURANCE COVERAGE:

The Contractor shall notify the City of changes in insurance coverage in writing within thirty (30) days.

INDEMNITY:

The Contractor shall, at all times, fully indemnify, hold harmless, and defend the City and its officers, members, agents, and employees from and against any and all claims and demands, actions, causes of action, and cost and fees of any character whatsoever made by anyone whomsoever on account of or in any way growing out of the performance of this contract by the Contractor and its employees, or because of any act or omission, neglect or misconduct of the Contractor, its employees and agents or its subcontractors including, but not limited to, any claims that may be made by the employees themselves for injuries to their person or property or otherwise. Such indemnity shall not be limited by reason of the enumeration of any insurance coverage herein provided.

Nothing contained herein shall be construed as prohibiting the City, its directors, officers, agents, or its employees, from defending through the selection and use of their own agents, attorneys and experts, any claims, actions or suits brought against them.

The Contractor shall likewise be liable for the cost, fees and expenses incurred in the City's or the Contractor's defense of any such claims, actions, or suits.

The Contractor shall be responsible for any damages incurred as a result of its errors, omissions or negligent acts and for any losses or costs to repair or remedy construction as a result of its errors, omissions or negligent acts.

CITY OF O'FALLON, MISSOURI

INSURANCE RATING:

All of the above-specified types of insurance shall be obtained from companies that have at least an A-VII rating in Best's Guide or the equivalent.

SURVIVAL OF INDEMNIFICATION:

The indemnification described above shall not be limited by reason of the enumeration of any insurance coverage herein provided, and it shall survive the termination of the Contract for claims arising from events occurring while the Contract is in force.

NOTICE OF LAWSUIT:

Within sixty (60) days of service of process, the City shall notify the Contractor of any lawsuit involving the indemnification provided for above. Failure to provide such notice shall not relieve the Contractor of its obligation to provide indemnification. However, the City shall be responsible for any additional costs of defense incurred due to their failure to provide such notice within sixty (60) days.

CHOICE OF LEGAL COUNSEL:

The contractor shall provide coverage as stipulated in the contract. In the event of a proceeding, the City retains the right to approve legal counsel for claims brought against the City.

DISPUTES:

Any dispute arising out of this agreement will be resolved under the laws of the State of Missouri.

END OF INSURANCE REQUIREMENTS

CITY OF O'FALLON, MISSOURI

BID FORM
23-071 SPARE SUBMERSIBLE PUMPS FOR LIFT STATIONS

(PLEASE TYPE OR PRINT THE FOLLOWING INFORMATION)

| | |
|-----------------------|--|
| Full Name of Bidder | |
| Main Business Address | |
| City, State, Zip Code | |
| Telephone Number | |
| Fax Number | |
| Bid Contact Person | |
| Email Address | |

TO: Christine Grabin, Purchasing Agent

The undersigned, being duly sworn, certifies that he is:

the Owner/Sole Proprietor a Member of the Partnership an Officer of the Corporation a Member of the Joint Venture

herein after called the Bidder and that the members of the Partnership or Officers of the Corporation are as follows:

_____ (President or Partner)

_____ (Vice-President or Partner)

_____ (Secretary or Partner)

_____ (Treasurer or Partner)

Further, as Contractor, declares that the only person or parties interested in this bid as principals are those named herein; that this bid is made without collusion with any other person, firm or corporation; that he has fully examined the proposed forms of agreement and the contract specifications for the above designated purchase, all of which are on file in the office of the City Clerk, 100 North Main Street, O'Fallon, Missouri 63366, and all other documents referred to or mentioned in the contract documents, specifications and attached exhibits, including Addenda No. _____, _____, and _____ issued thereto;

Further, the Contractor proposes and agrees, if this bid is accepted, to provide all necessary machinery, tools, apparatus and other means of construction, including transportation services necessary to furnish all the materials and equipment specified or referred to in the contract documents in the manner and time therein prescribed.

Further, the undersigned certifies and warrants that he is duly authorized to execute this certification/affidavit on behalf of the Bidder and in accordance with the Partnership Agreement or by-laws of the Corporation, and the laws of the State of Missouri and that this Certification is binding upon the Bidder and is true and accurate. Further, the undersigned certifies that the Bidder is not barred from bidding on this contract as a result of a violation of either bid rigging or bid-rotating.

The affiant deposes and says that he has examined and carefully prepared this bid and has checked the same in detail before submitting this bid, and that the statements contained herein are true and correct.

If a Corporation, the undersigned further certifies that the recitals and resolutions attached hereto and made a part hereof were properly adopted by the Board of Directors of the Corporation at a meeting of said Board of Directors duly called and held and have not been repealed, nor modified and that the same remain in full force and effect. *(Attach a copy of the corporate resolution granting the individual executing the contract documents authority to do so.)*

Finally, the Contractor agrees to do all other things required of the Contractor by the contract documents, and that he will take in full payment therefore the sums set forth in the bidding schedule.

Signature of Bidder authorizes the City to verify business references.

CITY OF O'FALLON, MISSOURI

SIGNATURE AND IDENTITY OF BIDDER

The undersigned states that the correct LEGAL NAME and ADDRESS of (1) the individual Bidder, (2) each partner or joint venture (whether individuals or corporations, and whether doing business under a fictitious name), or (3) the corporation (with the City in which it is incorporated) are shown below; that (if not signing with the intention of binding himself to become the responsible and sole contractor) he is the agent of, and duly authorized in writing to sign for the Bidder or Bidders; and that he is signing and executing this (as indicated in the proper spaces below) as the proposal of a

() sole individual () partnership () joint venture
() corporation, incorporated under laws of State of _____

Date Business Established: _____

Dated: _____

Name of individual, all partners,
or joint ventures:

Address of each:

| | |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

doing business under the name of:

Address of principal place of business in Missouri

_____ (If using a fictitious name, show this name above in addition to legal names)

_____ (If a corporation, show its name above)
ATTEST: (SEAL)

Secretary

Title

(NOTE: If the Bidder is doing business under a FICTITIOUS NAME, the Proposal shall be executed in the legal name of the individual, partners, joint ventures, or corporation, with the legal address shown, and REGISTRATION OF FICTITIOUS NAME filed with the Secretary of State, as required by Sections 417.200 to 417.230, RS Mo. If the Bidder is a CORPORATION NOT ORGANIZED UNDER THE LAWS OF MISSOURI, it shall procure a CERTIFICATE OF AUTHORITY TO DO BUSINESS IN MISSOURI, as required by Section 351.570 and following, RS Mo. A CERTIFIED COPY of such Registration of Fictitious Name or Certificate of Authority to do Business in Missouri shall be included with this bid.

CITY OF O'FALLON, MISSOURI

REFERENCES

The bidder must list four (4) references, listing firm name, address, telephone number and contact person to whom they have provided similar equipment, material or services for a period of not less than six (6) months.

The bidder verifies that they have provided equipment, material, or services described in this contract to the following parties with needs similar to that of City and authorizes the City to verify references of business and credit at its option.

| | |
|--------------------------|--|
| COMPANY NAME: | |
| ADDRESS: | |
| | |
| | |
| CONTACT PERSON: | |
| TELEPHONE NUMBER: | |

| | |
|--------------------------|--|
| COMPANY NAME: | |
| ADDRESS: | |
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| | |
| CONTACT PERSON: | |
| TELEPHONE NUMBER: | |

| | |
|--------------------------|--|
| COMPANY NAME: | |
| ADDRESS: | |
| | |
| | |
| CONTACT PERSON: | |
| TELEPHONE NUMBER: | |

| | |
|--------------------------|--|
| COMPANY NAME: | |
| ADDRESS: | |
| | |
| | |
| CONTACT PERSON: | |
| TELEPHONE NUMBER: | |

State the number of years in business _____ State the current number of personnel on staff _____

CITY OF O'FALLON, MISSOURI

ANTI-COLLUSION STATEMENT

STATE OF MISSOURI

CITY/COUNTY OF _____

_____ being first duly sworn, deposes and says that he is

Title of Person Signing

of _____

Name of Bidder

that all statements made and facts set out in the proposal for the above project are true and correct; and the bidder (The person, firm, association, or corporation making said bid) has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with said bid or any contract which may result from its acceptance.

Affiant further certifies that bidder is not financially interested in, or financially affiliated with, any other bidder for the above project.

BY _____

BY _____

BY _____

SWORN to before me this _____ day of _____ 20 ____.

Notary Public

My Commission Expires _____

CITY OF O'FALLON, MISSOURI

PREFERENCE IN PURCHASING PRODUCTS

DATE: _____

THE BIDDER'S ATTENTION IS DIRECTED TO Section 34.076 RSMo 2000 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids received will be evaluated on the basis of this legislation.

All vendors submitting a bid must furnish all information requested below.

FOR CORPORATIONS:

State in which incorporated: _____

FOR OTHERS:

State of domicile: _____

FOR ALL VENDORS:

List address of Missouri offices or places of business:

THIS SECTION MUST BE COMPLETED AND SIGNED:

FIRM NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

BY (signature required): _____

Federal Tax ID #: _____ if no Federal Tax ID # list SS #: _____

For bid to be considered, the Preference in Purchasing Products form must be filled out and submitted for each bid and dated in the current calendar year.

CITY OF O'FALLON, MISSOURI

MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT

The bidder's attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34/359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding and prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract and to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you must complete this form as directed below.

Failure to complete and return this document with this bid will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis. Please read the certification appearing below on this form.

[] If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left.

[] If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:

[] If any or all of the goods or products specified in the attached bid which the bidder proposes to supply to the State are not manufactured or produced in the "United States" as defined in Section 34.350, RsMO, then: (a) check the box at left; (b) list below, by item (or item number), the country other than the United States where each good or product is manufactured or produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the corresponding items (or item numbers) in the spaces provided.

Table with 2 columns: Item (or item number), Location Where Item Manufactured or Produced

(attach an additional sheet if necessary)

[] The following specified goods or products cannot be manufactured or produced in the United States in sufficient quantities or in time to meet the contract specifications. Items (or item numbers): _____

[] The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers): _____

CERTIFICATION

By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document is true, correct and complete, and may be relied upon by the City in determining the bidder's qualifications under and in compliance with the Missouri Domestic Products Procurement Act. The bidder's failure to complete and return this document with the bid as directed above will cause the City to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis pursuant to Section 34.353.3(2), RsMO.

CITY OF O'FALLON, MISSOURI

WORKER ELIGIBILITY VERIFICATION AFFIDAVIT

STATE OF _____)
) ss
COUNTY OF _____)

On the ____ day of _____, 20____, before me appeared _____,
Affiant name

personally known to me or proved to me on the basis of satisfactory evidence to be a person whose name is subscribed to this affidavit, who being by me duly sworn, stated as follows:

- I, the Affiant, am of sound mind, capable of making this affidavit, and personally certify the facts herein stated, as required by Section 285.530, RSMo, to enter into any contract agreement with the City to perform any job, task, employment, labor, personal services, or any other activity for which compensation is provided, expected, or due, including but not limited to all activities conducted by business entities.
- I, the Affiant, am the _____ of _____, and I am duly
title business name
authorized, directed, and/or empowered to act officially and properly on behalf of this business entity.
- I, the Affiant, hereby affirm and warrant that the aforementioned business entity is enrolled in a federal work authorization program operated by the United States Department of Homeland Security, and the aforementioned business entity shall participate in said program to verify the employment eligibility of newly hired employees working in connection with any services contracted by the City of O'Fallon. I have attached documentation to this affidavit to evidence enrollment/participation by the aforementioned business entity in a federal work authorization program, as required by Section 285.530, RSMo.
- I, the Affiant, also hereby affirm and warrant that the aforementioned business entity does not and shall not knowingly employ, in connection with any services contracted by the City, any alien who does not have the legal right or authorization under federal law to work in the United States, as defined in 8 U.S.C. § 1324a(h)(3).
- I, the Affiant, am aware and recognize that, unless certain contract and affidavit conditions are satisfied pursuant to Section 285.530, RSMo, the aforementioned business entity may be held liable under Sections 285.525 through 285.550, RSMo, for subcontractors that knowingly employ or continue to employ any unauthorized alien to work within the state of Missouri.
- I, the Affiant, acknowledge that I am signing this affidavit as a free act and deed of the aforementioned business entity and not under duress.

Affiant Signature

Subscribed and sworn to before me in _____, _____, the day and year first above-written.
city (or county) state

My commission expires: _____
Notary Public

[Attach documentation of enrollment/participation in a federal work authorization program]

Specifications and Pricing

Company Name: _____

The City of O'Fallon, Missouri is accepting sealed bids to purchase Spare Submersible Pumps for Lift Stations at various locations throughout the City.. Any manufacturers' names, trade names, brand names, information and/or catalog numbers listed in this specification *are descriptive, not restrictive* as a minimum requirement. The bidder may offer any product that meets or exceeds the applicable specifications. The bidder must demonstrate comparability, by including appropriate catalog materials, literature, specifications, test data, etc. The City will determine in its sole discretion whether a product is acceptable as an equivalent. Any deviation from the specifications shall be noted and submitted in writing on the Exception Sheet

1. Gentemann Lift Station: Submersible Grinder Pump Type ABS Piranha (see attachment A for detailed Specifications)

- Pump: \$ _____
 - Rail Base: \$ _____
 - Relay: \$ _____
 - Chain: \$ _____
- Total:** \$ _____

2. Mark Twain Lift Station: Submersible Sewage Pump Type ABS XFP (see Attachment B for detailed Specifications)

- Pump: \$ _____
 - Rail Base: \$ _____
 - Relay: \$ _____
 - Chain: \$ _____
- Total:** \$ _____

3. Brandywine Lift Station: Submersible Sewage Pump Type ABS XFP
(See Attachment C for detailed Specifications)

- Pump: \$ _____
 - Rail Base: \$ _____
 - Relay: \$ _____
 - Chain: \$ _____
- Total:** \$ _____

4. Hyland Green Lift Station: Submersible Sewage Pump Type ABS
XFP (See Attachment D for detailed
Specifications)

- Pump: \$ _____
 - Rail Base: \$ _____
 - Relay: \$ _____
 - Chain: \$ _____
- Total:** \$ _____

5. Hwy 70/79 Lift Station: Submersible Sewage Pump Type ABS XFP
(See Attachment E for detailed
Specifications)

- Pump: \$ _____
 - Rail Base: \$ _____
 - Relay: \$ _____
 - Chain: \$ _____
- Total:** \$ _____

Warranty Included: _____

Attachment A

TECHNICAL DATA



Submersible Grinder Pump Type ABS Piranha

Piranha PE | 1-1/4", 2 Pole, 1-Phase, 60 Hz, PE1

| Submersible Motor Specifications, PE1 Frame | | |
|---|--|-----|
| Motor Design | NEMA design B, squirrel cage induction | |
| Motor Type | Fully enclosed submersible, IP68 protection rating | |
| Motor Efficiency Standard and Rating | IEC 60034-30 ² | |
| Motor Efficiency Test Protocol | IEC 60034-2-1 ² | |
| Insulation Material | Class H, 180°C (356°F), copper windings | |
| Motor Filling Medium | Air | |
| Temperature Rise | Class A | |
| Maximum Fluid Temperature | 40°C (104°F) continuous, 50°C (122°F) intermittent | |
| Motor Protection | Thermal | STD |
| | Normally closed bimetallic switch in each phase, connected in series, 140°C (284°F) +/- 5°C (41°F) opening temperature | |
| Motor Protection | Leakage | STD |
| | Moisture detection probe in seal sensing chamber (for use with appropriate relay) | |
| Sensing Chamber Filling | Medium | |
| Bearing Type | Upper | |
| | Environmentally safe, non-toxic oil | |
| Bearing Type | Lower | |
| | Single row, deep groove ball bearing, permanently lubricated | |
| Bearing Type | Lower | |
| | Double row, angular contact ball bearing, permanently lubricated | |
| Motor Starter Types | Use with Direct-On-Line starting (DOL) recommended | |
| Maximum Starts per Hour | 12, evenly spaced | |
| Maximum Submergence | 20 meters (65 feet) | |
| Available Voltages | 208, 230, 460, 600 (consult factory for other voltages) | |
| Voltage Tolerance from Rated | +/-10% | |
| Agency Approvals | Factory Mutual, CSA | |
| Explosion Proof Rating | NEC 500 Class 1, Division 1, Group C & D, Class T3C max surface temp | |



The picture above may differ from the actual product. For illustrative purposes only.

¹ Requires external start kit mounted in the control panel. See document DS-Z01-009 for single phase start kits.
² Single phase motors are not covered by the 1.0, 2008-10 edition of the IEC standard, however the PE series of motors are constructed and tested in accordance with the IEC 60034-30 standard.

| Motor Ratings, PE1 Frame | | | | | | | | | | | | | | |
|--------------------------|------------------|-------------------------|-------------|---------------|----------------|-------------------|------------------|---------------------|----------------------------|------|------|------------------------|------|------|
| Motor Model | Input Power (P1) | Rated Power Output (P2) | Nominal RPM | Rated Voltage | Full Load Amps | Locked Rotor Amps | NEMA Code Letter | NEMA Service Factor | Motor Efficiency at % Load | | | Power Factor at % Load | | |
| | | | | | | | | | 100 | 75 | 50 | 100 | 75 | 50 |
| PE 25/2W ¹ | 2.9 kW | 2.5 kW 3.4 HP | 3564 | 208 230 | C/F 13.3 | C/F 79 | F | 1.3 | 85.4 | 82.2 | 72.7 | .957 | .896 | .818 |
| PE 35/2W ¹ | 4.5 kW | 4.0 kW 5.4 HP | 3544 | 208 230 | C/F 20.0 | C/F 79 | B | 1.3 | 88.3 | 87.5 | 81.7 | .963 | .969 | .940 |
| PE 45/2W ¹ | 5.1 kW | 4.5 kW 6.0 HP | 3536 | 208 230 | C/F 22.4 | C/F 79 | A | 1.3 | 88.1 | 88.2 | 83.7 | .992 | .973 | .953 |

DS-P01-021 REV: 4 DATE: 08/15 Specifications Subject to Change Without Notice



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TECHNICAL DATA



Submersible Grinder Pump Type ABS Piranha

Piranha PE | 1-1/4", 2 Pole, 1-Phase, 60 Hz, PE1

| Cable Data, PE1 Frame | | | | | | |
|-----------------------|------------------------------------|-------------------------|-----------|---|--|---------------------|
| | Motor | Motor Voltage | Cable Qty | Cable Type | Cable Nominal Outside Diameter +/- .5mm (.02") | |
| | | | | | Power | Ground |
| Power Cable | PE 25/2W | 208 | C/F | C/F | | |
| | | 230 | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power |
| | PE 35/2W | 208 | C/F | C/F | | |
| | | 230 | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power |
| | PE 45/2W | 208 | C/F | C/F | | |
| | | 230 | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power |
| Control Cable | Motor Monitoring Type ³ | | Cable Qty | Cable Type | Cable Nominal Outside Diameter +/- .5mm (.02") | |
| | Std monitoring | | | | - | Integrated w/ Power |
| Cable Length | | Standard: 10m (32 feet) | | Optional: 15m (49 feet), 20m (65 feet), 30m (98 feet); Consult Factory for longer lengths | | |

³ See motor protection on page 1.

| Pump Data | | | | | | |
|---|--|-----------|-----------|-----------|--|--|
| Discharge Size | DN32 oblong flanged, 1-1/4" female NPT w/ the use of discharge adapter kit | | | | | |
| Suction Size | N/A | | | | | |
| Volute Pressure Rating | 10 bar (145 psi) | | | | | |
| Impeller Type | Semi-Open, Multi-vane, w/ Cutter Assembly & Seal Protection System | | | | | |
| Impeller | Code | PE25/2W | PE35/2W | PE45/2W | | |
| | Diameter, mm (in.) | 133 (5.2) | 150 (5.9) | 160 (6.3) | | |
| Solids Passage Size, mm (in.) | N/A (N/A) | N/A (N/A) | N/A (N/A) | | | |
| Min. Recommended Flow, GPM ⁴ | 20 | 20 | 20 | | | |

⁴ Recommend minimum continuous flow. Discharge pipe size can affect minimum flow rate required for solids transport. Consult factory for applications below this flow rate.

| Materials of Construction | | |
|----------------------------|---|--|
| | Standard | Optional |
| Power/Control Cable Jacket | Chlorinated Polyethylene (CPE) | |
| Lifting Hoop | Stainless Steel 1.4401 (AISI 316) | |
| Cable Connection Chamber | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Motor Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Intermediate Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Seal Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Pump and Motor Shaft | Stainless Steel 1.4021 (AISI 420) | |
| Impeller | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Wear Parts | Rotating Cutter | Stainless Steel 1.4528 (AISI 440B+Co), 58-62 HRC |
| | Stationary Cutter | Stainless Steel 1.4528 (AISI 440B+Co), 58-62 HRC |
| | Bottom/Wear Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) |
| Volute | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| External Hardware | Stainless Steel 1.4401 (AISI 316) | |
| O-Rings and Cable Glands | Nitrile (Buna-N) | |
| Mechanical Seals | Lower | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS |
| | Upper | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS |
| Coating/Protection | Two-part epoxy, blue, 120µm (4.7 mil) DFT | Two-part epoxy, blue, 400µm (15.7 mil) |

| General Data | | | |
|----------------|----------------|----------------|----------------|
| | PE 25/2W | PE 35/2W | PE 45/2W |
| Overall Height | 604mm (23.8") | 604mm (23.8") | 604mm (23.8") |
| Pump Weight | 94 kg (207 lb) | 94 kg (207 lb) | 94 kg (207 lb) |

DS-P01-021 REV-4 DATE: 08/15 Specifications Subject to Change Without Notice



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CITY OF O'FALLON, MISSOURI

Attachment B

TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 80C-CB1 | 3", 6 Pole, 1-Phase, 60 Hz, PE1

| Submersible Motor Specifications, PE1 Frame | | |
|---|---|--|
| Motor Design | NEMA design B, squirrel cage induction | |
| Motor Type | Fully enclosed Premium Efficiency submersible, IP68 protection rating | |
| Motor Efficiency Standard and Rating | IEC 60034-30:2008 ⁴ | |
| Motor Efficiency Test Protocol | IEC 60034-2-1 ⁴ | |
| Insulation Material | Class H, 180°C (356°F), copper windings | |
| Motor Filling Medium | Air | |
| Temperature Rise | Class A; Class B with optional cooling system | |
| Maximum Fluid Temperature | 40°C (104°F) continuous, 50°C (122°F) intermittent | |
| Cooling System | OPT Environmentally safe, nontoxic, oil-filled motor, no cooling jacket required | |
| Motor Protection | Thermal | Normally closed bimetallic switch in each phase, connected in series, 140°C (284°F) +/- 5°C (41°F) opening temperature |
| | Leakage | Moisture detection probe in seal sensing chamber (for use with appropriate relay) |
| Sensing Chamber Filling Medium | Environmentally safe, nontoxic oil | |
| Bearing Type | Upper | Single row deep groove ball bearing, permanently lubricated |
| | Lower | Double row angular contact ball bearing, permanently lubricated |
| Motor Starter Types | Suitable for use with direct-on-line (DOL) capacitor start-capacitor run ¹ | |
| Maximum Starts per Hour | 15, evenly spaced | |
| Inverter Duty Rating | Motors meet NEMA MG1, part 31 requirements | |
| Maximum Submergence | 20 meters (65 feet) | |
| Available Voltages | 208, 230, 460, 600 (consult factory for other voltages) | |
| Voltage Tolerance from Rated | +/-10% | |
| Agency Approvals | Factory Mutual, CSA | |
| Explosion Proof Rating | NEC 500 Class 1, Division 1, Group C & D, Class T3C max surface temp | |



The picture above may differ from the actual product. For illustrative purposes only.

¹ Requires external start kit mounted in the control panel. See document DS-Z01-009 for Sulzer single phase start kits.
² Single phase motors are not covered by the 1.0, 2008-10 edition of the IEC standard; however the PE series of motors are constructed and tested in accordance with the standard.

| Motor Ratings, PE1 Frame | | | | | | | | | | | | | | |
|--------------------------|------------------|-------------------------|-------------|---------------|----------------|-------------------|------------------|---------------------|----------------------------|------|------|------------------------|------|------|
| Motor Model | Input Power (P1) | Rated Power Output (P2) | Nominal RPM | Rated Voltage | Full Load Amps | Locked Rotor Amps | NEMA Code Letter | NEMA Service Factor | Motor Efficiency at % Load | | | Power Factor at % Load | | |
| | | | | | | | | | 100 | 75 | 50 | 100 | 75 | 50 |
| PE 20/6W | 2.6 kW | 2.0 kW 2.7 HP | 1146 | 208 230 | 13.3 12.0 | 26 24 | A | 1.3 | 77.8 | 71.8 | 61.6 | .935 | .886 | .784 |

DS-ED1-063 REV.2 DATE: 10/16 Specifications Subject to Change Without Notice



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TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 80C-CB1 | 3", 6 Pole, 1-Phase, 60 Hz, PE1

| Cable Data, PE1 Frame | | | | | | |
|-----------------------|------------------------------------|---------------|--|--|--|---------------------|
| Power Cable | Motor | Motor Voltage | Cable Qty | Cable Type ¹ | Cable Nominal Outside Diameter +/- .5mm (.02") | |
| | | | | | Power | Ground |
| | PE 20/6W | 208 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power |
| | | 230 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power |
| Control Cable | Motor Monitoring Type ² | Cable Qty | Cable Type | Cable Nominal Outside Diameter +/- .5mm (.02") | | |
| | Std monitoring | N/A | Integrated w/ Power | Integrated w/ Power | | |
| Cable Length | Standard: 15m (49 feet) | | Optional: 20m (65 feet), 30m (98 feet); Consult Factory for longer lengths | | | |

¹Type SOOW power cables have integrated control wires. ²See motor protection on page 1.

| Pump Data | | | | | | |
|---|--|------------|------------|--|--|--|
| Discharge Size | DN80 flanged, compatible with 3" class 125 ANSI flanges (fitting must be rotated 22.5° for compatibility) | | | | | |
| Suction Size (Wet-Pit / Dry-Pit) | 4" flanged / 4" flanged, compatible with 4" class 125 ANSI flanges, threaded for 8x5/8-11 UNC screws, 28mm (1.1") deep | | | | | |
| Volute Pressure Rating | 16 bar (232 psi) | | | | | |
| Impeller Type | Semi-open, 1-vane, Contrablock Plus, w/ Seal Protection System | | | | | |
| Impeller Code | .4 | .2 | .1 | | | |
| Impeller Diameter, mm (In.) | 180 (7.1) | 195 (7.7) | 212 (8.3) | | | |
| Solids Passage Size, mm (In.) | 76.2 (3.0) | 76.2 (3.0) | 76.2 (3.0) | | | |
| Min. Recommended Flow, GPM ³ | 145 | 160 | 165 | | | |

³Recommend minimum continuous flow. Consult factory for applications below this flow rate.

| Materials of Construction | | | Standard | Optional |
|------------------------------|--|--|----------|----------|
| Power/Control Cable Jacket | Chlorinated Polyethylene (CPE) | | | |
| Lifting Hoop | Stainless Steel 1.4401 (AISI 316) | | | |
| Cable Connection Chamber | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | | | |
| Motor Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | | | |
| Intermediate Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | | | |
| Seal Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | | | |
| Pump and Motor Shaft | Stainless Steel 1.4021 (AISI 420) | | | |
| Impeller | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ⁴ | | | |
| Wear Parts Bottom/Wear Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ⁴ | | | |
| Volute | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | | | |
| External Hardware | Stainless Steel 1.4401 (AISI 316) | | | |
| O-Rings and Cable Glands | Nitrile (Buna-N) | | | |
| Mechanical Lower | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | | | |
| Seals Upper | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | | | |
| Coating/Protection | Two-part epoxy, blue, 120µm (4.7 mil) DFT | | | |
| | Zinc Anodes | | | |

⁴Hardening of bottom edge of impeller vane and wear plate surface available. Consult factory for details.

| General Data (Standard Materials of Construction & Cable Length) | | | | | | |
|--|-----------------|--|--|--|--|--|
| | PE 20/6W | | | | | |
| Overall Height | 700mm (27.6") | | | | | |
| ≈ Pump Weight (Non-Cooled) | 127 kg (280 lb) | | | | | |

DS-E01-063 REV.2 DATE: 10/16 Specifications Subject to Change Without Notice



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Attachment C

TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 100E-CB1 | 4", 4 Pole, 3-Phase, 60 Hz, PE2

| Submersible Motor Specifications, PE2 Frame | |
|---|--|
| Motor Design | NEMA design B, squirrel cage induction |
| Motor Type | Fully enclosed Premium Efficiency submersible, IP68 protection rating |
| Motor Efficiency Standard and Rating | IEC 60034-30, IE3 rating |
| Motor Efficiency Test Protocol | IEC 60034-2-1 |
| Insulation Material | Class H, 180°C (356°F), copper windings |
| Motor Filling Medium | Air |
| Temperature Rise | Class A; Class B with optional cooling system |
| Maximum Fluid Temperature | 40°C (104°F) continuous, 50°C (122°F) Intermittent |
| Cooling System | OPT Environmentally safe, nontoxic, oil-filled motor; no cooling jacket required |
| Motor Protection | Thermal Normally closed bimetallic switch in each phase, connected in series, 140°C (284°F) +/- 5°C (41°F) opening temperature |
| | Leakage Moisture detection probe in seal sensing chamber (for use with appropriate relay) |
| Sensing Chamber Filling Medium | Environmentally safe, nontoxic oil |
| Bearing Type | Upper Single row deep groove ball bearing, permanently lubricated |
| | Lower Double row angular contact ball bearing, permanently lubricated |
| Motor Starter Types | Suitable for use with direct-on-line (DOL), electronic soft starters, and PWM type Variable Frequency Drives ¹ |
| Maximum Starts per Hour | 15, evenly spaced |
| Inverter Duty Rating | Motors meet NEMA MG1, part 31 requirements |
| Maximum Submergence | 20 meters (65 feet) |
| Available Voltages | 208, 230, 460, 600 (consult factory for other voltages) |
| Voltage Tolerance from Rated | +/- 10% |
| Agency Approvals | Factory Mutual, CSA |
| Explosion Proof Rating | NEC 500 Class 1, Division 1, Group C & D, Class T3C max surface temp |



The picture above may differ from the actual product. For illustrative purposes only.

¹ Output filters may be required on VFDs. See document DS-E00-001 for details.

| Motor Ratings, PE2 Frame | | | | | | | | | | | | | | |
|--------------------------|------------------|-------------------------|-------------|---------------|----------------|-------------------|------------------|---------------------|----------------------------|------|------|------------------------|------|------|
| Motor Model | Input Power (P1) | Rated Power Output (P2) | Nominal RPM | Rated Voltage | Full Load Amps | Locked Rotor Amps | NEMA Code Letter | NEMA Service Factor | Motor Efficiency at % Load | | | Power Factor at % Load | | |
| | | | | | | | | | 100 | 75 | 50 | 100 | 75 | 50 |
| PE 45/4 | 5.0 kW | 4.5 kW 6.0 HP | 1767 | 208 | 18.1 | 111 | H | 1.3 | 90.6 | 92.5 | 90.0 | .761 | .676 | .555 |
| | | | | 230 | 16.4 | 101 | | | | | | | | |
| | | | | 460 | 8.2 | 50 | | | | | | | | |
| | | | | 600 | 6.3 | 39 | | | | | | | | |
| PE 56/4 | 6.1 kW | 5.6 kW 7.5 HP | 1757 | 208 | 21.8 | 132 | H | 1.3 | 91.7 | 91.0 | 88.4 | .778 | .717 | .595 |
| | | | | 230 | 19.7 | 120 | | | | | | | | |
| | | | | 460 | 9.9 | 60 | | | | | | | | |
| | | | | 600 | 7.6 | 46 | | | | | | | | |
| PE 75/4 | 8.2 kW | 7.5 kW 10.1 HP | 1762 | 208 | 30.6 | 176 | G | 1.3 | 91.7 | 91.9 | 91.6 | .742 | .654 | .534 |
| | | | | 230 | 27.7 | 159 | | | | | | | | |
| | | | | 460 | 13.8 | 80 | | | | | | | | |
| | | | | 600 | 10.6 | 61 | | | | | | | | |
| PE 90/4 | 9.8 kW | 9.0 kW 12.1 HP | 1762 | 208 | 34.9 | 234 | H | 1.3 | 91.8 | 91.5 | 88.8 | .781 | .707 | .581 |
| | | | | 230 | 31.6 | 211 | | | | | | | | |
| | | | | 460 | 15.8 | 106 | | | | | | | | |
| | | | | 600 | 12.1 | 81 | | | | | | | | |
| PE 105/4 | 11.4 kW | 10.5 kW 14.1 HP | 1754 | 208 | 39.2 | 234 | G | 1.3 | 92.4 | 92.6 | 90.9 | .806 | .754 | .632 |
| | | | | 230 | 35.4 | 212 | | | | | | | | |
| | | | | 460 | 17.7 | 106 | | | | | | | | |
| | | | | 600 | 13.6 | 81 | | | | | | | | |

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CITY OF O'FALLON, MISSOURI

TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 100E-CB1 | 4", 4 Pole, 3-Phase, 60 Hz, PE2

| Cable Data, PE2 Frame | | | | | | |
|-----------------------|------------------------------------|---|-------------------------|--|--|--|
| Motor | Motor Voltage | Cable Qty | Cable Type ² | Cable Nominal Outside Diameter +/- .5mm (.02") | | |
| | | | | Power | Ground | |
| PE 45/4 | 208 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 56/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 75/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 90/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 105/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power | |
| Control Cable | Motor Monitoring Type ³ | | Cable Qty | Cable Type | Cable Nominal Outside Diameter +/- .5mm (.02") | |
| | Std monitoring | | N/A | Integrated w/ Power | Integrated w/ Power | |
| Cable Length | | Standard: 15m (49 feet) Optional: 20m (65 feet), 30m (98 feet); Consult Factory for longer lengths | | | | |

² Type SOOW power cables have integrated control wires. ³ See motor protection on page 1.

| Pump Data | | | | | | | | |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Discharge Size | 4" flanged, compatible with 4" class 125 ANSI flanges | | | | | | | |
| Suction Size (Wet-Pit / Dry-Pit) | 4" flanged / 4" flanged, compatible with 4" class 125 ANSI flanges, threaded for 8x5/8-11 UNC screws, 30mm (1.2") deep | | | | | | | |
| Volute Pressure Rating | 16 bar (232 psi) | | | | | | | |
| Impeller Type | Semi-Open, 1-vane, Contrablock Plus, w/ Seal Protection System | | | | | | | |
| Impeller | Code | .6 | .5 | .4a | .4 | .3 | .2 | .1 |
| | Diameter, mm (in.) | 185 (7.3) | 195 (7.7) | 208 (8.2) | 217 (8.5) | 225 (8.9) | 240 (9.4) | 250 (9.8) |
| Solids Passage Size, mm (in.) | 80 (3.15) | | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | |
| Min. Recommended Flow, GPM ⁴ | 200 | | 250 | 270 | 290 | 300 | 330 | 320 |

⁴ Recommend minimum continuous flow. Consult factory for applications below this flow rate.

| Materials of Construction | | |
|--------------------------------|--|---|
| | Standard | Optional |
| Power/Control Cable Jacket | Chlorinated Polyethylene (CPE) | |
| Lifting Hoop | Stainless Steel 1.4401 (AISI 316) | |
| Cable Connection Chamber | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Motor Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Intermediate Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Seal Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Pump and Motor Shaft | Stainless Steel 1.4021 (AISI 420) | |
| Impeller | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ¹ | Duplex Stainless Steel 1.4470 (ASTM A890, CD3MN Grade 4A) |
| Wear Parts - Bottom/Wear Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ¹ | Duplex Stainless Steel 1.4470 (ASTM A890, CD3MN Grade 4A) |
| Volute | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| External Hardware | Stainless Steel 1.4401 (AISI 316) | |
| O-Rings and Cable Glands | Nitrile (Buna-N) | Viton ² |
| Mechanical Seals - Lower | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | Silicon Carbide / Silicon Carbide, Viton ² , 316 SS |
| Mechanical Seals - Upper | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | |
| Coating/Protection | Two-part epoxy, blue, 120µm (4.7 mil) DFT | Two-part epoxy, blue, 400µm (15.7 mil); Wet-end liquid ceramic coating, 500µm (19.7 mil); Zinc Anodes |

¹ Hardening of bottom edge of impeller vane and wear plate surface available. Consult factory for details.

| General Data (Standard Materials of Construction & Cable Length) | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| | PE 45/4 | PE 56/4 | PE 75/4 | PE 90/4 | PE 105/4 |
| Overall Height | 762mm (30.0") | 762mm (30.0") | 762mm (30.0") | 832mm (32.8") | 832mm (32.8") |
| ≈ Pump Weight (Non-Cooled) | 171 kg (377 lb) | 171 kg (377 lb) | 181 kg (400 lb) | 201 kg (444 lb) | 210 kg (462 lb) |

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CITY OF O'FALLON, MISSOURI

Attachment D

TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 100E-CB1 | 4", 4 Pole, 3-Phase, 60 Hz, PE2

| Submersible Motor Specifications, PE2 Frame | | |
|---|---|--|
| Motor Design | NEMA design B, squirrel cage induction | |
| Motor Type | Fully enclosed Premium Efficiency submersible, IP68 protection rating | |
| Motor Efficiency Standard and Rating | IEC 60034-30, IE3 rating | |
| Motor Efficiency Test Protocol | IEC 60034-2-1 | |
| Insulation Material | Class H, 180°C (356°F), copper windings | |
| Motor Filling Medium | Air | |
| Temperature Rise | Class A; Class B with optional cooling system | |
| Maximum Fluid Temperature | 40°C (104°F) continuous, 50°C (122°F) intermittent | |
| Cooling System | OPT | |
| Motor Protection | Thermal | Normally closed bimetallic switch in each phase, connected in series, 140°C (284°F) +/- 5°C (41°F) opening temperature |
| | Leakage | Moisture detection probe in seal sensing chamber (for use with appropriate relay) |
| Sensing Chamber Filling Medium | Environmentally safe, nontoxic oil | |
| Bearing Type | Upper | Single row deep groove ball bearing, permanently lubricated |
| | Lower | Double row angular contact ball bearing, permanently lubricated |
| Motor Starter Types | Suitable for use with direct-on-line (DOL), electronic soft starters, and PWM type Variable Frequency Drives ¹ | |
| Maximum Starts per Hour | 15, evenly spaced | |
| Inverter Duty Rating | Motors meet NEMA MG1, part 31 requirements | |
| Maximum Submergence | 20 meters (65 feet) | |
| Available Voltages | 208, 230, 460, 600 (consult factory for other voltages) | |
| Voltage Tolerance from Rated | +/-10% | |
| Agency Approvals | Factory Mutual, CSA | |
| Explosion Proof Rating | NEC 500 Class 1, Division 1, Group C & D, Class T3C max surface temp | |



¹ Output filters may be required on VFDs. See document DS-E00-001 for details.

| Motor Ratings, PE2 Frame | | | | | | | | | | | | | | |
|--------------------------|------------------|-------------------------|-------------|---------------|----------------|-------------------|------------------|---------------------|----------------------------|------|------|------------------------|------|------|
| Motor Model | Input Power (P1) | Rated Power Output (P2) | Nominal RPM | Rated Voltage | Full Load Amps | Locked Rotor Amps | NEMA Code Letter | NEMA Service Factor | Motor Efficiency at % Load | | | Power Factor at % Load | | |
| | | | | | | | | | 100 | 75 | 50 | 100 | 75 | 50 |
| PE 45/4 | 5.0 kW | 4.5 kW 6.0 HP | 1767 | 208 | 18.1 | 111 | H | 1.3 | 90.6 | 92.5 | 90.0 | .761 | .676 | .555 |
| | | | | 230 | 16.4 | 101 | | | | | | | | |
| | | | | 460 | 8.2 | 50 | | | | | | | | |
| | | | | 600 | 6.3 | 39 | | | | | | | | |
| PE 56/4 | 6.1 kW | 5.6 kW 7.5 HP | 1757 | 208 | 21.8 | 132 | H | 1.3 | 91.7 | 91.0 | 88.4 | .778 | .717 | .595 |
| | | | | 230 | 19.7 | 120 | | | | | | | | |
| | | | | 460 | 9.9 | 60 | | | | | | | | |
| | | | | 600 | 7.6 | 46 | | | | | | | | |
| PE 75/4 | 8.2 kW | 7.5 kW 10.1 HP | 1762 | 208 | 30.6 | 176 | G | 1.3 | 91.7 | 91.9 | 91.6 | .742 | .654 | .534 |
| | | | | 230 | 27.7 | 159 | | | | | | | | |
| | | | | 460 | 13.8 | 80 | | | | | | | | |
| | | | | 600 | 10.6 | 61 | | | | | | | | |
| PE 90/4 | 9.8 kW | 9.0 kW 12.1 HP | 1762 | 208 | 34.9 | 234 | H | 1.3 | 91.8 | 91.5 | 88.8 | .781 | .707 | .581 |
| | | | | 230 | 31.6 | 211 | | | | | | | | |
| | | | | 460 | 15.8 | 106 | | | | | | | | |
| | | | | 600 | 12.1 | 81 | | | | | | | | |
| PE 105/4 | 11.4 kW | 10.5 kW 14.1 HP | 1754 | 208 | 39.2 | 234 | G | 1.3 | 92.4 | 92.6 | 90.9 | .806 | .754 | .632 |
| | | | | 230 | 35.4 | 212 | | | | | | | | |
| | | | | 460 | 17.7 | 106 | | | | | | | | |
| | | | | 600 | 13.6 | 81 | | | | | | | | |

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CITY OF O'FALLON, MISSOURI

TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 100E-CB1 | 4", 4 Pole, 3-Phase, 60 Hz, PE2

| Cable Data, PE2 Frame | | | | | |
|-----------------------|------------------------------------|---|-------------------------|--|--|
| Motor | Motor Voltage | Cable Qty | Cable Type ² | Cable Nominal Outside Diameter +/- .5mm (.02") | |
| | | | | Power | Ground |
| PE 45/4 | 208 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power |
| | 230 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power |
| | 460 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power |
| PE 56/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 460 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power |
| PE 75/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 460 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power |
| PE 90/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 460 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power |
| PE 105/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power |
| | 460 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power |
| | 600 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power |
| Control Cable | Motor Monitoring Type ³ | | Cable Qty | Cable Type | Cable Nominal Outside Diameter +/- .5mm (.02") |
| | Std monitoring | | N/A | Integrated w/ Power | Integrated w/ Power |
| Cable Length | | Standard: 15m (49 feet) Optional: 20m (65 feet), 30m (98 feet); Consult Factory for longer lengths | | | |

² Type SOOW power cables have integrated control wires. ³ See motor protection on page 1.

| Pump Data | | | | | | | |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|
| Discharge Size | 4" flanged, compatible with 4" class 125 ANSI flanges | | | | | | |
| Suction Size (Wet-Pit / Dry-Pit) | 4" flanged / 4" flanged, compatible with 4" class 125 ANSI flanges, threaded for 8x5/8-11 UNC screws, 30mm (1.2") deep | | | | | | |
| Volute Pressure Rating | 16 bar (232 psi) | | | | | | |
| Impeller Type | Semi-Open, 1-vane, Contrablock Plus, w/ Seal Protection System | | | | | | |
| Impeller | Code | .6 | .5 | .4a | .4 | .3 | .2 |
| | Diameter, mm (in.) | 185 (7.3) | 195 (7.7) | 208 (8.2) | 217 (8.5) | 225 (8.9) | 240 (9.4) |
| Solids Passage Size, mm (In.) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) |
| Min. Recommended Flow, GPM ⁴ | 200 | 250 | 270 | 290 | 300 | 330 | 320 |

⁴ Recommend minimum continuous flow. Consult factory for applications below this flow rate.

| Materials of Construction | | |
|--------------------------------|--|---|
| | Standard | Optional |
| Power/Control Cable Jacket | Chlorinated Polyethylene (CPE) | |
| Lifting Hoop | Stainless Steel 1.4401 (AISI 316) | |
| Cable Connection Chamber | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Motor Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Intermediate Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Seal Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Pump and Motor Shaft | Stainless Steel 1.4021 (AISI 420) | |
| Impeller | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ¹ | Duplex Stainless Steel 1.4470 (ASTM A890, CD3MN Grade 4A) |
| Wear Parts - Bottom/Wear Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ¹ | Duplex Stainless Steel 1.4470 (ASTM A890, CD3MN Grade 4A) |
| Volute | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| External Hardware | Stainless Steel 1.4401 (AISI 316) | |
| O-Rings and Cable Glands | Nitrile (Buna-N) | Viton [®] |
| Mechanical Lower | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | Silicon Carbide / Silicon Carbide, Viton [®] , 316 SS |
| Seals Upper | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | |
| Coating/Protection | Two-part epoxy, blue, 120µm (4.7 mil) DFT | Two-part epoxy, blue, 400µm (15.7 mil); Wet-end liquid ceramic coating, 500µm (19.7 mil); Zinc Anodes |

¹ Hardening of bottom edge of impeller vane and wear plate surface available. Consult factory for details.

| General Data (Standard Materials of Construction & Cable Length) | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| | PE 45/4 | PE 56/4 | PE 75/4 | PE 90/4 | PE 105/4 |
| Overall Height | 762mm (30.0") | 762mm (30.0") | 762mm (30.0") | 832mm (32.8") | 832mm (32.8") |
| ≈ Pump Weight (Non-Cooled) | 171 kg (377 lb) | 171 kg (377 lb) | 181 kg (400 lb) | 201 kg (444 lb) | 210 kg (462 lb) |

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CITY OF O'FALLON, MISSOURI

Attachment E

TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 100E-CB1 | 4", 4 Pole, 3-Phase, 60 Hz, PE2

| Submersible Motor Specifications, PE2 Frame | |
|---|---|
| Motor Design | NEMA design B, squirrel cage induction |
| Motor Type | Fully enclosed Premium Efficiency submersible, IP58 protection rating |
| Motor Efficiency Standard and Rating | IEC 60034-30, IE3 rating |
| Motor Efficiency Test Protocol | IEC 60034-2-1 |
| Insulation Material | Class H, 180°C (356°F), copper windings |
| Motor Filling Medium | Air |
| Temperature Rise | Class A; Class B with optional cooling system |
| Maximum Fluid Temperature | 40°C (104°F) continuous, 50°C (122°F) intermittent |
| Cooling System | OPT |
| | Environmentally safe, nontoxic, oil-filled motor; no cooling jacket required |
| Motor Protection | Thermal |
| | Normally closed bimetallic switch in each phase, connected in series, 140°C (284°F) +/- 5°C (41°F) opening temperature |
| | Leakage |
| | Moisture detection probe in seal sensing chamber (for use with appropriate relay) |
| Sensing Chamber Filling Medium | Environmentally safe, nontoxic oil |
| Bearing Type | Upper |
| | Single row deep groove ball bearing, permanently lubricated |
| | Lower |
| | Double row angular contact ball bearing, permanently lubricated |
| Motor Starter Types | Suitable for use with direct-on-line (DOL), electronic soft starters, and PWM type Variable Frequency Drives ¹ |
| Maximum Starts per Hour | 15, evenly spaced |
| Inverter Duty Rating | Motors meet NEMA MG1, part 31 requirements |
| Maximum Submergence | 20 meters (65 feet) |
| Available Voltages | 208, 230, 460, 600 (consult factory for other voltages) |
| Voltage Tolerance from Rated | +/-10% |
| Agency Approvals | Factory Mutual, CSA |
| Explosion Proof Rating | NEC 500 Class 1, Division 1, Group C & D, Class T3C max surface temp |



The picture above may differ from the actual product. For illustrative purposes only.

¹ Output filters may be required on VFDs. See document DS-E00-001 for details.

| Motor Ratings, PE2 Frame | | | | | | | | | | | | | | |
|--------------------------|------------------|-------------------------|-------------|---------------|----------------|-------------------|------------------|---------------------|----------------------------|------|------|------------------------|------|------|
| Motor Model | Input Power (P1) | Rated Power Output (P2) | Nominal RPM | Rated Voltage | Full Load Amps | Locked Rotor Amps | NEMA Code Letter | NEMA Service Factor | Motor Efficiency at % Load | | | Power Factor at % Load | | |
| | | | | | | | | | 100 | 75 | 50 | 100 | 75 | 50 |
| PE 45/4 | 5.0 kW | 4.5 kW 6.0 HP | 1767 | 208 | 18.1 | 111 | H | 1.3 | 90.6 | 92.5 | 90.0 | .761 | .676 | .555 |
| | | | | 230 | 16.4 | 101 | | | | | | | | |
| | | | | 460 | 8.2 | 50 | | | | | | | | |
| | | | | 600 | 6.3 | 39 | | | | | | | | |
| PE 56/4 | 6.1 kW | 5.6 kW 7.5 HP | 1757 | 208 | 21.8 | 132 | H | 1.3 | 91.7 | 91.0 | 88.4 | .778 | .717 | .595 |
| | | | | 230 | 19.7 | 120 | | | | | | | | |
| | | | | 460 | 9.9 | 60 | | | | | | | | |
| | | | | 600 | 7.6 | 46 | | | | | | | | |
| PE 75/4 | 8.2 kW | 7.5 kW 10.1 HP | 1762 | 208 | 30.6 | 176 | G | 1.3 | 91.7 | 91.9 | 91.6 | .742 | .654 | .534 |
| | | | | 230 | 27.7 | 159 | | | | | | | | |
| | | | | 460 | 13.8 | 80 | | | | | | | | |
| | | | | 600 | 10.6 | 61 | | | | | | | | |
| PE 90/4 | 9.8 kW | 9.0 kW 12.1 HP | 1762 | 208 | 34.9 | 234 | H | 1.3 | 91.8 | 91.5 | 88.8 | .781 | .707 | .581 |
| | | | | 230 | 31.6 | 211 | | | | | | | | |
| | | | | 460 | 15.8 | 106 | | | | | | | | |
| | | | | 600 | 12.1 | 81 | | | | | | | | |
| PE 105/4 | 11.4 kW | 10.5 kW 14.1 HP | 1754 | 208 | 39.2 | 234 | G | 1.3 | 92.4 | 92.6 | 90.9 | .806 | .754 | .632 |
| | | | | 230 | 35.4 | 212 | | | | | | | | |
| | | | | 460 | 17.7 | 106 | | | | | | | | |
| | | | | 600 | 13.6 | 81 | | | | | | | | |

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TECHNICAL DATA



Submersible Sewage Pump Type ABS XFP

XFP 100E-CB1 | 4", 4 Pole, 3-Phase, 60 Hz, PE2

| Cable Data, PE2 Frame | | | | | | |
|-----------------------|------------------------------------|---|-------------------------|--|--|--|
| Motor | Motor Voltage | Cable Qty | Cable Type ² | Cable Nominal Outside Diameter +/- .5mm (.02") | | |
| | | | | Power | Ground | |
| PE 45/4 | 208 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 56/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 75/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 90/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 14/7 | 17.6mm (0.69") | Integrated w/ Power | |
| PE 105/4 | 208 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 230 volt | 1 | SOOW 8/4+16/3 | 24.4mm (0.96") | Integrated w/ Power | |
| | 460 volt | 1 | SOOW 10/7 | 20.7mm (0.82") | Integrated w/ Power | |
| | 600 volt | 1 | SOOW 12/7 | 18.8mm (0.74") | Integrated w/ Power | |
| Control Cable | Motor Monitoring Type ³ | | Cable Qty | Cable Type | Cable Nominal Outside Diameter +/- .5mm (.02") | |
| | Std monitoring | | N/A | Integrated w/ Power | Integrated w/ Power | |
| Cable Length | | Standard: 15m (49 feet) Optional: 20m (65 feet), 30m (98 feet); Consult Factory for longer lengths | | | | |

² Type SOOW power cables have integrated control wires. ³ See motor protection on page 1.

| Pump Data | | | | | | | |
|---|--|-----------|-----------|-----------|-----------|-----------|-----------|
| Discharge Size | 4" flanged, compatible with 4" class 125 ANSI flanges | | | | | | |
| Suction Size (Wet-Pit / Dry-Pit) | 4" flanged / 4" flanged, compatible with 4" class 125 ANSI flanges, threaded for 6x5/8-11 UNC screws, 30mm (1.2") deep | | | | | | |
| Volute Pressure Rating | 16 bar (232 psi) | | | | | | |
| Impeller Type | Semi-Open, 1-vane, Contrablock Plus, w/ Seal Protection System | | | | | | |
| Impeller | Code | 6 | 5 | .4a | .4 | 3 | .2 |
| | Diameter, mm (in.) | 185 (7.3) | 195 (7.7) | 208 (8.2) | 217 (8.5) | 225 (8.9) | 240 (9.4) |
| Solids Passage Size, mm (in.) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) | 80 (3.15) |
| Min. Recommended Flow, GPM ⁴ | 200 | 250 | 270 | 290 | 300 | 330 | 320 |

⁴ Recommend minimum continuous flow. Consult factory for applications below this flow rate.

| Materials of Construction | | |
|--------------------------------|--|---|
| | Standard | Optional |
| Power/Control Cable Jacket | Chlorinated Polyethylene (CPE) | |
| Lifting Hoop | Stainless Steel 1.4401 (AISI 316) | |
| Cable Connection Chamber | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Motor Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Intermediate Housing | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Seal Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| Pump and Motor Shaft | Stainless Steel 1.4021 (AISI 420) | |
| Impeller | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ⁵ | Duplex Stainless Steel 1.4470 (ASTM A890, CD3MN Grade 4A) |
| Wear Parts - Bottom/Wear Plate | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) ⁵ | Duplex Stainless Steel 1.4470 (ASTM A890, CD3MN Grade 4A) |
| Volute | Cast Iron EN-GJL-250 (ASTM A-48, Class 35B) | |
| External Hardware | Stainless Steel 1.4401 (AISI 316) | |
| O-Rings and Cable Glands | Nitrile (Buna-N) | Viton ⁶ |
| Mechanical Lower | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | Silicon Carbide / Silicon Carbide, Viton ⁶ , 316 SS |
| Seals Upper | Silicon Carbide / Silicon Carbide, Nitrile, 316 SS | |
| Coating/Protection | Two-part epoxy, blue, 120µm (4.7 mil) DFT | Two-part epoxy, blue, 400µm (15.7 mil); Wet-end liquid ceramic coating, 500µm (19.7 mil); Zinc Anodes |

⁵ Hardening of bottom edge of impeller vane and wear plate surface available. Consult factory for details.

| General Data (Standard Materials of Construction & Cable Length) | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|
| | PE 45/4 | PE 56/4 | PE 75/4 | PE 90/4 | PE 105/4 |
| Overall Height | 762mm (30.0") | 762mm (30.0") | 762mm (30.0") | 832mm (32.8") | 832mm (32.8") |
| ≈ Pump Weight (Non-Cooled) | 171 kg (377 lb) | 171 kg (377 lb) | 181 kg (400 lb) | 201 kg (444 lb) | 210 kg (462 lb) |

DS-E01-024 REV: 8 DATE: 10/16 Specifications Subject to Change Without Notice



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CITY OF O'FALLON, MISSOURI

Signature of bidder indicates that bidder understands and will comply with all terms and conditions and all other specifications made a part of this invitation to bid and any subsequent award of contract. All terms, conditions and representations made in the invitation will become an integral part of the contract.

Acknowledge the receipt of addenda by checking below as appropriate:

Addendum 1 _____ **Addendum 2** _____ **Addendum 3** _____ **Addendum 4** _____

BID AWARD CRITERIA:

This bid will be awarded to the lowest responsive, responsible bidder meeting specifications based upon the total lump sum bid amount.

The Contractor agrees to provide the equipment, service and supplies described above and in the contract specifications under the conditions outlined in attached documents for the amount stated above.

X _____
(Signature and Title)

CORPORATE SEAL
(If available)

BID MUST BE SIGNED FOR CONSIDERATION

Subscribed and Sworn to before me this _____ day of _____ AD, 20_____

_____ My Commission Expires: _____
(Notary Public)



CITY OF O'FALLON, MISSOURI
PURCHASING DEPARTMENT
100 North Main Street
O'Fallon, MO 63366
T: (636) 379-5527

LATE BIDS CANNOT BE ACCEPTED!



| <u>SEALED BID</u> | |
|---|--|
| INVITATION #: | 23-071 |
| OPENING DATE: | 09/14/2023 |
| OPENING TIME: | 2:15 P.M. CDT |
| DESCRIPTION: | SPARE SUBMERSIBLE PUMPS FOR LIFT STATIONS |
| DATED MATERIAL-DELIVER IMMEDIATELY | |

PLEASE CUT OUT AND AFFIX THIS BID LABEL
(ABOVE) TO THE OUTERMOST ENVELOPE OF
YOUR BID TO HELP ENSURE PROPER
DELIVERY!

LATE BIDS CANNOT BE ACCEPTED!