

PROPOSAL SUBMITTAL DOCUMENTS

for

City of Pflugerville, Texas

on the

**Pfennig Lane Pump Station
Vertical Turbine Pumps and Motors
Variable Frequency Drives
Field Services**

**ENGINEER:
Freese & Nichols, Inc.**

**SPECIFICATIONS:
Section 11072: Pumping Equipment: Vertical Turbine**

For questions, please contact...

SMITH PUMP COMPANY, INC.
1900 West Howard Lane
Austin, Texas 78728

Attention: Jean Radtke

Phone: 512.310.1480
Facsimile: 512.310.1417
E-mail: jeanr@smithpump.com

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City of Pflugerville-Pfennig Lane PS Pre-Purchase Pumps, Motors and VFDs Bid Proposal

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**SECTION 00 30 00
PROPOSAL FORM**

00 30 00 PROPOSAL FORM

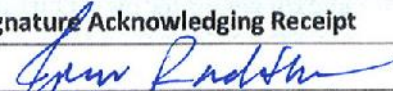

ARTICLE 1 – PROPOSAL RECIPIENT

1.01 This Proposal is submitted to:

**City of Pflugerville
c/o Sabrina Schmidt
100 East Main, Suite 100
Pflugerville, Texas 78660
Attention: Proposal Form
Pfennig Pump Station Improvements Pump, Motor, and
VFD Equipment Pre-Purchase**

ARTICLE 2 – OFFEROR’S ACKNOWLEDGMENTS

- 2.01 Offeror proposes and agrees, if this Proposal is accepted, to enter into an Agreement with Owner on the form included in the Contract Documents, to provide Goods and Special Services specified or indicated in Contract Documents for the Contract Price indicated in this Proposal or as modified by Contract Amendment. Offeror agrees to provide Goods and Special Services within the Contract Times established in the Agreement or as modified by Contract Amendment and comply with the all other terms and conditions of the Contract Documents.
- 2.02 Offeror accepts all of the terms and conditions of the Request for Proposals and Instructions to Offerors, including those dealing with required bonds. The Proposal will remain subject to acceptance for 60 days after the opening of Proposals.
- 2.03 Offeror accepts the provisions of the Agreement as to liquidated damages in the event of its failure to provide Goods and Special Services in accordance with the schedule set forth in the Agreement.
- 2.04 Offeror acknowledges receipt of the following Addenda:

Addendum No.	Addendum Date	Signature Acknowledging Receipt
1	2/18/14	
2	3/6/14	

ARTICLE 3 – OFFEROR’S REPRESENTATIONS

3.01 The Offeror has examined and carefully studied the Contract Documents and the other related data identified in the Proposal Documents.

- 3.02 The Offeror has become familiar with and is satisfied as to the general, local, and Site conditions that may impact providing Goods and Special Services.
- 3.03 The Offeror is familiar with Laws and Regulations that may impact providing Goods and Special Services.
- 3.04 The Offeror has considered the:
- A. Information known to Offeror;
 - B. Information commonly known to Sellers doing business in the area of Site;
 - C. Information and observations obtained from visits to the Site; and
 - D. The Contract Documents.
- 3.05 Based on the information and observations referred to in the preceding paragraphs, Offeror agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for providing Goods and Special Services at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- 3.06 The Offeror is aware of the general nature of construction to be performed by Buyer, Contractor, and others at the Site that relates to providing Goods and Special Services as indicated in the Contract Documents.
- 3.07 The Offeror has correlated the information known to the Offeror, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- 3.08 The Offeror has given the PCM written notice of all conflicts, errors, ambiguities, or discrepancies that the Offeror has discovered in the Contract Documents, and the written resolution provided by the PCM is acceptable to the Offeror.
- 3.09 The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for providing Goods and Special Services.
- 3.10 Offeror's entry into this Contract constitutes an incontrovertible representation by Offeror that without exception all prices in the Agreement are premised upon providing the Goods and Special Services required by the Contract Documents.

ARTICLE 4 – BASIS OF OFFER

- 4.01 Offeror will provide Goods and Special Services in accordance with the Contract Documents at the unit prices shown in the following Table – Proposal Form Table 1.

Proposal Form Table 1

A. Section 00 30 00 "Proposal Form"

1. Article 4 – Basis of Offer – Remove and replace the Proposal Form Table 1 with the following table:

Item No.	Description	Unit	Estimated Quantity	Unit Price	Extended Amount
Pump Station (PS) - Proposal Item A					
1	Furnish two (2) Vertical Turbine Pumping Units and Drivers at the Pfennig Lane Pump Station with a rated capacity of 2,200 gpm at 305 feet TDH; with guaranteed wire-to-water efficiency of <u>78.6</u> % at 305 feet TDH (Rated Point), complete as specified.	EA	2.00	134,000.00	268,000.00
2	Furnish two (2) Low Voltage Variable Frequency Drives complete as specified.	EA	2.00	149,834.00	299,668.00
3	Re-machine top can flange in field.	EA	2.00	6945.00	13,890.00
TOTAL AMOUNT					581,558.00

- A. Extended amounts have been computed multiplying the number of units by the unit price.
B. Unit Price and figures column will be used to compute the actual Proposal price.

ARTICLE 5 – TIME OF COMPLETION

- 5.01 Offeror agrees that the Goods and Special Service will be complete and ready for final payment in accordance with Paragraph 10.02 of the General Conditions within the number of Calendar Days indicated in Section 00 52 23 "Agreement".

ARTICLE 6 – ATTACHMENTS TO THIS PROPOSAL

- 6.01 The following documents are attached to and made a condition of this Proposal:
- A. Section 00 30 02 "Proposal Security (Bid Bond),"
 - B. Section 00 30 03 "Vendor Compliance to State Law Certificate,"
 - C. Section 00 30 04 "Seller Compliance to Texas Sales Tax Code,"
 - D. Section 00 30 05 "Conflict of Interest Questionnaire,"
 - E. Section 00 30 06 "Non-Collusion Affidavit," and
 - F. Section 00 45 16 "Statement of Qualifications."

ARTICLE 7 – DEFINED TERMS

- 7.01 The terms used in this Proposal have the meanings indicated in the General Conditions and the Supplementary Conditions. The significance of terms with initial capital letters is described in the General Conditions.



Remit to: 1900 Howard Lane West
Austin, TX 78728

Phone: (512) 310-1480
Fax: (512) 310-1417

Bill to ..: City of Pflugerville
P.O. Box 589
Pflugerville, TX 78660

QUOTATION

Number: SQ012328-1 Page : 1 of 5
Sales order: Date .: 3/7/2014
Your ref.: Our ref: 137
Requisition: Payme: Net 30 Days
Quotation deadline : 4/4/2014 Sales : DRM
Delivery Term: FOB Destination Name : Darrel R. Mize

Contact :
Phone : 512 251 3076
Fax ...: 512 251 5768

Ship to : City of Pflugerville
Pfennig Lane Pump Station
VTP 102 and 103
Pflugerville, TX 78660

Contact :
Phone :
Fax ...:

QUOTATION

UNIT	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
1.0000	Bid Item 1: Pumps and Motors	2.00	134,000.00	268,000.00

Q=2200 gpm
H=305' TDH
P=250 hp
N=1800 rpm
Wire to water efficiency=78.6%
Base to bell=12.8'

Each pump with:

- Flowserve 15EMM 3-stage bowl assemblies, Ni-Al-Bz impellers, hardened Ni-Al-Bz case and impeller wear rings, SS collets, 10" flanged column, 416SS lineshafting, bronze-backed rubber lineshaft bearings, 10" fabricated steel discharge head with Rains-Flo packing, sleeved LS at stuffingbox, all SS fasteners, 316 SS suction screen with hydrocone, 3-piece coupling, non-witness hydrostatic test, non-witness performance bowl test with calculated losses for 100%, 90%, 80% and 70% speeds
- Blast and coat per 09 96 00.01.
- USEM 250hp/1800rpm/460v/3ph vertical solid-shaft motor, WP1 enclosure, rated inverter duty, short commercial and complete tests, motor manufacturer service representative, 120v space heaters, vibration switches and thermal switch in accessory box, copper bar rotor

Additional items:

- Pre and post submittal meetings with vendor Project Managers
- Item lateral and torsional analysis, structure dynamic analysis, forces and moments analysis
- Item Certified Test Results for pump and motor factory performance tests, bowl hydrostatic test, stress relieve certificates, barrel mounting level measurements, pump and motor field tests
- Item Equipment Installation Report
- Item maximum backspin speed certification
- Item spare parts
- Item lubricants
- Item O&M manuals



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UNIT	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
------	-------------	----------	------------	-------

- Item field services to included starting & adjusting, preliminary operational test, systsem operational test and troubleshooting, as required
- Item training
- Item 2 year warranty

Notes:

1. Items NOT included: installation, piping, valves, conduit, wiring, disconnects and off-loading at jobsite.
2. Flowserve exceptions:
 - a. Flowserve will accept test efficiency deductions of up to \$6000 per for a maximum of \$12,000.00.
 - b. Flowserve will match mark the complete pump prior to shipping. Pump will ship into Smith Pump - Waco shop for blasting and coating and reassembly prior to shipment into the field.
3. USEM exceptions:
 - a. USEM is guaranteeing motor efficiency at sine wave power and at full load.
 - b. 2.02.A.8. USEM will have torched and brazed end rings. Rotors shall be stacked and then welded.
 - c. 2.02.E.1. USEM is quoting a NEMA Type II box that cannot be rotated 90-degrees due to its size.
 - d. 2.02.H.4. USEM is supplying the Metrix 162 VTS vibration transmitter with (2) per thrust bearing. USEM no longer offers MC 160A vibration transducers. The PMC 440DR to be supplied by others.
4. Schedules:
 - a. Submittal can be made 4 weeks after excecuted contract.
 - b. Pump delivery is 28-30 weeks after release for production.

2.0000 Bid Item 2: VFDs **2.00 149,834.00 299,668.00**

Allen Bradley PF753, 18-pulse adjustable frequency drives, custom engineered per Specification 09 96 00, to include all materials, labor and documentation. Pricing includes pre- and post-submittal meetings, pre-test conference call, field startup, testing, training and troubleshooting. Spare parts per 3.05 are included. Documentation to include submittal, test plan, factory and field test results and O&M manuals.

Notes:

1. Pricing does not include installation, wiring, power and motor cable termination lugs and off-loading at jobsite.
2. Schedules:
 - a. Submittal is 6-8 weeks after executed contract.
 - b. Delivery is 14-16 weeks after release for production.
3. Exceptions:
 - a. 2.02.2.b. AB drives provide a standard power ride-thru of 15 milliseconds or less than 1 cycle at full load.



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Fax ...: 512 251 5768

Ship to : City of Pflugerville
Pfennig Lane Pump Station
VTP 102 and 103
Pflugerville, TX 78660

Contact :
Phone :
Fax ...:

UNIT	DESCRIPTION	QUANTITY	UNIT PRICE	TOTAL
------	-------------	----------	------------	-------

b. Spare parts: One spare EPROM chip for each VFD is included. One microprocessor-based interface display and monitoring panel and keyboard. This is the scope of the spares.

3.0000	Bid Item 3: Field Machining of Top Can Flanges	2.00	6,945.00	13,890.00
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Field services to machine (2) existing top barrel flanges to meet .002"/foot level. Scope includes all labor and machinery to complete work within 5-7 working days.

Notes:

1. Allowable removal of top can flange is 3/16" maximum. If more than 3/16" must be removed, then top barrel flange should be reviewed for structural integrity prior to proceeding.
2. Pricing includes "clean up" of o-ring groove and replacement o-ring.

Thank you for the opportunity to quote our equipment on this project. Please feel free to call me with any questions.

Regards,
Jean Radtke
512.310.1480
512.310.1417 fax
512.970.5958 cell
jeanr@smithpump.com

Sales balance	Total discount	Misc. charges	Sales tax	Round-off	Total
581,558.00	0.00	0.00	0.00	0.00	581,558.00 USD



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Contact :
Phone :
Fax ...:

TERMS AND CONDITIONS

1. Applicability – These Terms and Conditions of Sale (“Terms”) shall govern all sales of equipment or services to Customer. These Terms supersede any prior written or oral agreement, understanding, representation or promise and any pre-printed or standard terms and conditions contained in Customer’s request for quote, purchase order, invoice, order acknowledgement or similar document. These Terms may not be amended, supplemented, changed or modified except by concurrent or subsequent written agreement signed by an authorized representative of both Smith Pump Company (“SPCO”) and Customer. SPCO’s acknowledgement of Customer’s purchase order shall not constitute acceptance of any terms or conditions contained therein which are in any way inconsistent with the Terms. Any additional or different terms or conditions included in any acceptance of this quotation are expressly disclaimed and rejected in advance, and unless there is prior mutual agreement otherwise, shall not become a part of any contract resulting from this quotation.

2. Price – Unless otherwise stated in this quotation, all prices are FOB shipping point. All transportation, insurance and similar charges incident to delivery shall be borne by the customer. This quotation is valid for thirty (30) days only. Shipping dates are approximate and are based on prompt receipt of all necessary information. In the case of delay in furnishing complete information to SPCO, dates of shipment may be extended for a reasonable time. In the event SPCO provides transport services, these will be quoted as a lump sum price based on destination and shipping mode.

In the event Customer requests a delay or suspension in the completion and/or shipment of equipment or services covered by this quotation, or any part thereof, for any reason, the parties shall agree upon any cost and/or scheduling impact of such delay and all such costs to Customer’s account. Any delay period beyond thirty (30) days after original scheduled shipment date shall require Customer to (i) take title and risk of loss of any equipment covered by this quotation, and (ii) make arrangements for the storage of such equipment with SPCO or other party. SPCO’s invoice, which is contractually based on shipment, shall be issued upon SPCO’s readiness to ship the equipment covered by this quotation.

SPCO shall not be liable for delay and delivery due to causes beyond its reasonable control including, but not limited to, acts of God, acts of government, acts of Customer, fires, labor disputes, boycotts, floods, epidemics, quarantine restrictions, war, insurrection, terrorism, riot, civil or military authority, freight embargos, transportation shortages or delays, unusually severe weather or inability to obtain necessary labor, materials or manufacturing facilities due to such causes. In the event of any such delay, the date of delivery shall be extended for a length of time equal to the period of the delay.

3. Warranty – SPCO warrants new equipment or parts to be free from defects in materials and workmanship for a period of eighteen (18) months from the date of shipment or twelve (12) months from the date of startup or initial use, whichever comes first. SPCO SHALL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR LIQUIDATED DAMAGES. NO EXPRESSED OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. Repairs performed by SPCO are warranted against defects in workmanship and/or materials for a period of twelve (12) months from the date of shipment. SPCO will not be responsible for any removal or reinstallation charges or transportation charges in cases where equipment has failed under these warranty conditions. SPCO’s sole obligation and Customer’s sole remedy under this warranty is repair or replacement at SPCO’s election. Customer agrees to provide SPCO reasonable and clear access to any equipment covered by this warranty which may include removal or materials or structures as well as supplying any equipment, materials or structures which are necessary to provide reasonable access to the equipment being repaired or replaced. Costs to remove and/or reinstall equipment for warranty purposes shall be the responsibility of Customer.

Replacement parts or repairs furnished under this warranty shall be subject to warranty provisions herein for the remaining warranty period. All equipment repaired or replaced will be warranted only for the remainder of the original warranty period. SPCO does not warrant the equipment covered by this quotation or any repair/replacement part against the effects of erosion, corrosion, or normal wear and tear due to operation or the environment. The warranty and remedies set forth herein are conditioned upon proper storage, installation, use and maintenance of the equipment covered by this quotation in all material respects, and in accordance with SPCO’s written recommendations. Customer must notify SPCO in writing of any warranty claim during the warranty period or within thirty (30) days thereafter.

SPCO will not be liable under this warranty if warranted goods have been exposed or subjected to any (1) maintenance, repair, installation, handling, packaging, transportation, storage, operation, or use which is improper or otherwise not in compliance with SPCO’s instructions, (2) alteration, modification or repair by anyone other than SPCO or those specifically authorized by SPCO, (3) accident, contamination, foreign object damage, abuse, neglect, or negligence after shipment to Customer, (4) damage caused by failure of an SPCO supplied product not under warranty or by any hardware or software not supplied by SPCO, (5) use of counterfeit or replacement parts that are not manufactured by the manufacturer of goods provided by SPCO or approved by SPCO for use in goods provided by SPCO, or (6) goods which are normally consumed in operation or which have normal life inherently shorter than the warranty period including, but not limited to, consumables (e.g. lamps, batteries, storage capacitors).

4. Payment – All prices are net cash to be paid thirty (30) days after date of invoice. Customer agrees to make payment within that period. Discounts will apply only as stated on the invoice. Invoices unpaid for thirty (30) days after issuance shall bear interest at the highest lawful rate due and payable on any invoiced account, which is delinquent and not paid within the stated terms. Should Customer for any reason fail to pay in accordance with these terms, Customer agrees to pay all collection costs, attorney’s fees and expenses incurred in collecting payment. If Customer’s financial condition is or becomes unsatisfactory to SPCO, SPCO reserves the right to (a) require payment from Customer on a cash in advance basis, (b) require a letter of credit or other acceptable security before shipment, (c) cancel shipment at any time prior to delivery without further obligation or liability on SPCO’s part, (d) terminate any contract or obligation on the part of SPCO, or (e) require other special payment terms acceptable to SPCO to assure payment. All extensions of credit are subject to the approval of SPCO’s credit department and management.

5. Taxes – The amount of all federal, state or local taxes applicable to the sale, use, delivery or transportation of the equipment or services sold hereunder and all duties, imports, tariffs, and other similar levies shall be added to the contract price and paid by the Customer except where the Customer shall furnish an appropriate certificate of exemption.



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Pfennig Lane Pump Station
VTP 102 and 103
Pflugerville, TX 78660

Contact :
Phone :
Fax ...:

- 6. Property Damage – SPCO shall not be responsible for damage to topsoil or groundcover in connection with the work or service performed under this contract. SPCO shall not be responsible for claims arising from the pumping of water onto the ground which is necessary in connection with the service or work provided by SPCO. The customer agrees to hold SPCO harmless from claims arising out of damage caused by the pumping of water onto the ground.
- 7. Startup – If the equipment supplied pursuant to this quotation has a warranty requirement, qualified SPCO personnel must be present during the initial equipment startup and commissioning. Failure to request and assure the presence of qualified SPCO personnel will void any warranty herein. Requests for startup must occur at least seven (7) days prior to the scheduled date of the startup.
- 8. Limitation of Liability – The remedies set forth herein are exclusive and the total liability of SPCO with respect to this quotation, and any contract for goods or services arising from this quotation, or for any breach thereof, whether based on contract, warranty, torts (including negligence), indemnity, strict liability or otherwise, shall not exceed the quotation or sales price of the specific equipment or service which gives rise to the claim.
- 9. Setoff – All amounts that Customer owes SPCO under this quotation shall be due and payable in accordance with the terms of the quotation. Customer shall not setoff such amounts or any portion thereof, whether or not liquidated, against sums which Customer asserts are due to it, its parent, affiliates, subsidiaries or other division under other transactions with SPCO.
- 10. Customer Cancellation – Customer may cancel this order only upon written notice and payment to SPCO of reasonable and proper cancellation charges. In the event of cancellation, Customer must pay for all material, expense and labor costs incurred by SPCO in connection with the materials and services to be provided pursuant to this quotation, as well as all expenses relating to any specially fabricated materials and restocking charges.
- 11. Assignment – Neither party may assign this order or any portion thereof without the advance, written consent of the other party, which consent shall not be unreasonably withheld.
- 12. Waiver/Severability – Failure by SPCO to assert all or any of its rights upon any breach by Customer shall not be deemed a waiver of such rights either with respect to such breach or any subsequent breach, nor shall any waiver be implied from the acceptance of any payment. No waiver of any right shall extend to or affect any other right Customer may possess nor shall such waiver extend to any subsequent similar or dissimilar breach.
If any portion of these Terms are determined to be illegal, invalid or unenforceable for any reason, such provision shall be deemed stricken for the purposes of the dispute in question and all other provisions shall remain in full force and effect.
- 13. Applicable Law – The contract involving the sale of the equipment and services covered by this quotation shall be interpreted in accordance with the laws of the State of Texas. This contract is performable in McLennan County, Texas and venue for any court action in any way relating to or arising out of this contract shall be McLennan County, Texas.

ACCEPTED BY:
COMPANY NAME: _____

PROJECT REFERENCE: _____

SIGNED ON DATE: _____

SIGNED: _____

PRINTED NAME: _____

ARTICLE 8 – STATEMENT OF MATERIALS AND OTHER CHARGES

8.01 Provide the completed form in Section 00 30 04 "Seller Compliance to Texas Sales Tax Code" with the Proposal.

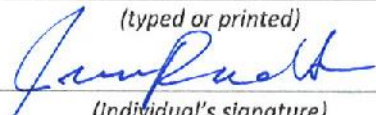
ARTICLE 9 – VENUE

9.01 Offeror agrees that venue shall lie exclusively in Travis County, Texas for any legal action.

ARTICLE 10 – PROPOSAL SUBMITTAL

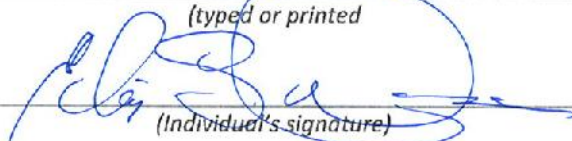
10.01 This Proposal is submitted by:

Offeror: Smith Pump Company, Inc
(typed or printed)

By: 
(Individual's signature)

Name: Jean Radtke
(typed or printed)

Title: Vice President
(typed or printed)

Attest: 
(Individual's signature)

Address for giving notices: 1900 West Howard Lane, Austin, Texas 78728

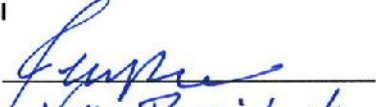

Phone: 512-310-1480

E-mail: jeanr@smithpump.com

(If Offeror is a corporation, partnership or a joint venture, attach evidence of authority to sign.)

END OF SECTION

00 30 02 PROPOSAL SECURITY (BID BOND)

<p>Offeror as Principal Name: Smith Pump Company, Inc. Mailing address (<i>principal place of business</i>): 301 M&B Industrial Blvd. Waco, TX 76712</p>	<p>Surety Name: SureTec Insurance Company Mailing address (<i>principal place of business</i>): 9737 Great Hills Trail, Ste 320 Austin, TX 78759 Physical address(<i>principal place of business</i>): -same-</p>
<p>Owner Name: City of Pflugerville, TX Mailing address (<i>principal place of business</i>): 100 E. Main, Suite 100 Pflugerville, TX 78660</p>	<p>Surety is a corporation organized and existing under the laws of the state of: Texas By submitting this bond, Surety affirms their authority to do business in the State of Texas and their license to execute bonds in the State of Texas.</p>
<p>Proposal Project name and location: Pfennig Pump Station Improvements Pflugerville, TX Proposal Due Date: March 7, 2014 Contract Price Offered: \$550,000.00</p>	<p>Telephone (<i>main number</i>): (512) 732-0099 Telephone (<i>for notice of claim</i>): (512) 732-0099</p>
<p>Bond Bond Number: n/a Date of Bond: March 7, 2014 (<i>Date of Bond cannot be earlier than Proposal Due Date</i>) Penal Sum for Bond: Five Percent of Great- (Five Percent of the Contract Price Offered) est Amount Bid by Contractor (5% GAB)</p>	<p>Local Agent for Surety Name: Steven D. Nelson Address: 9737 Great Hills Trail, Ste 320 Austin, TX 78759 Telephone: (512) 732-0099 The address of the surety company to which any notice of claim should be sent may be obtained from the Texas Department of Insurance by calling the following toll-free telephone number: 1-800-252-3439</p>
<p>Surety and Offeror, intending to be legally bound by this bond, do each cause this bond to be duly executed on its behalf by its authorized officer, agent or representative. The Offeror and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally to this bond. The condition of this obligation is such that if Owner accepts Offeror's Proposal and Offeror delivers the executed Agreement and the required performance and payment bonds within the time stipulated in the Proposal Documents this obligation is null and void. Payment under this Bond will be due and payable upon default by Proposer and within 30 calendar days after receipt by Proposer and Surety of written notice of default from Owner. Venue shall lie exclusively in Travis County, Texas for any legal action.</p>	
<p>Seller as Principal Signature:  Name and Title: <u>Vice President</u></p>	<p>Surety Signature:  Name and Title: <u>Brenda Jaynes, Attorney-in-Fact</u></p>

END OF SECTION

SureTec Insurance Company

LIMITED POWER OF ATTORNEY

Know All Men by These Presents, That SURETEC INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Texas, and having its principal office in Houston, Harris County, Texas, does by these presents make, constitute and appoint

Brenda Jaynes

its true and lawful Attorney-in-fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver any and all bonds, recognizances, undertakings or other instruments or contracts of suretyship to include waivers to the conditions of contracts and consents of surety for:

Principal: Smith Pump Company, Inc.
Obligee: City of Pflugerville, TX
Amount: \$ 550,000.00

and to bind the Company thereby as fully and to the same extent as if such bond were signed by the President, sealed with the corporate seal of the Company and duly attested by its Secretary, hereby ratifying and confirming all that the said Attorney-in-Fact may do in the premises. Said appointment is made under and by authority of the following resolutions of the Board of Directors of the SureTec Insurance Company:

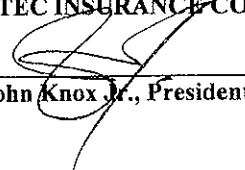
Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and of behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached. (Adopted at a meeting held on 20th of April, 1999.)

In Witness Whereof, SURETEC INSURANCE COMPANY has caused these presents to be signed by its President, and its corporate seal to be hereto affixed this 21st day of March, A.D. 2013.

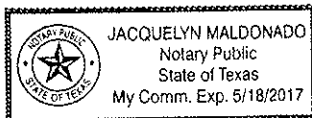
SURETEC INSURANCE COMPANY

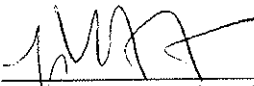
By: 
 John Knox Jr., President



State of Texas ss:
 County of Harris

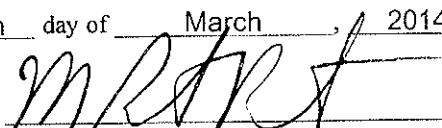
On this 21st day of March, A.D. 2013 before me personally came John Knox Jr., to me known, who, being by me duly sworn, did depose and say, that he resides in Houston, Texas, that he is President of SURETEC INSURANCE COMPANY, the company described in and which executed the above instrument; that he knows the seal of said Company; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said Company; and that he signed his name thereto by like order.




 Jacquelyn Maldonado, Notary Public
 My commission expires May 18, 2017

I, M. Brent Beaty, Assistant Secretary of SURETEC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney, executed by said Company, which is still in full force and effect; and furthermore, the resolutions of the Board of Directors, set out in the Power of Attorney are in full force and effect.

Given under my hand and the seal of said Company at Houston, Texas this 7th day of March, 2014, A.D.


 M. Brent Beaty, Assistant Secretary

Any instrument issued in excess of the penalty stated above is totally void and without any validity.
 For verification of the authority of this power you may call (713) 812-0800 any business day between 8:00 am and 5:00 pm CST.

<p style="text-align: center;">SureTec Insurance Company THIS BOND RIDER CONTAINS IMPORTANT COVERAGE INFORMATION</p>
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Statutory Complaint Notice

To obtain information or make a complaint: You may call the Surety's toll free telephone number for information or to make a complaint at: 1-866-732-0099. You may also write to the Surety at:

SureTec Insurance Company
9737 Great Hills Trail, Suite 320
Austin, Tx 78759

You may contact the Texas Department of Insurance to obtain information on companies, coverage, rights or complaints at 1-800-252-3439. You may write the Texas Department of Insurance at:

PO Box 149104
Austin, TX 78714-9104
Fax#: 512-475-1771
Web: <http://www.tdi.state.tx.us>
Email: ConsumerProtection@tdi.state.tx.us

PREMIUM OR CLAIM DISPUTES: Should you have a dispute concerning your premium or about a claim, you should contact the Surety first. If the dispute is not resolved, you may contact the Texas Department of Insurance.

Terrorism Risks Exclusion

The Bond to which this Rider is attached does not provide coverage for, and the surety shall not be liable for, losses caused by acts of terrorism, riot, civil insurrection, or acts of war.

**Exclusion of Liability for
Mold, Mycotoxins, Fungi & Environmental Hazards**

The Bond to which this Rider is attached does not provide coverage for, and the surety thereon shall not be liable for, molds, living or dead fungi, bacteria, allergens, histamines, spores, hyphae, or mycotoxins, or their related products or parts, nor for any environmental hazards, bio-hazards, hazardous materials, environmental spills, contamination, or cleanup, nor the remediation thereof, nor the consequences to persons, property, or the performance of the bonded obligations, of the occurrence, existence, or appearance thereof.

00 30 03 VENDOR COMPLIANCE TO STATE LAW

Chapter 2252 of the Texas Government Code applies to the award of government contract to non-resident bidders. This law provides that:

“a government entity may not award a governmental contract to a nonresident bidder unless the nonresident underbids the lower bid submitted by a responsible resident bidder by an amount that is not less than the amount by which a resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in the state in which the nonresident’s principal place of business is located.”

“Nonresident Bidder” refers to a person who is not a resident of Texas

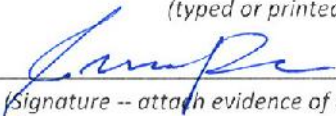
“Resident Bidder” refers to a person whose principal place of business is in this state, including a Seller whose ultimate parent company or majority owner has its principal place of business in this state.

Check the statement that is correct for Bidder.

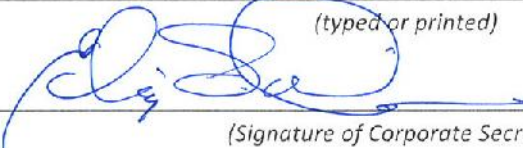
- Non-resident bidders in _____ (give state), our principal place of business, are required to be _____ percent lower than resident bidders by State law. A copy of the statute is attached.
- Non-resident bidders in _____ (give state), our principal place of business, are not required to under bid resident bidders.
- Our principal place of business or corporate offices are in the State of Texas.

Bidder:

Company Name: Smith Pump Company, Inc.
(typed or printed)

By: 
(Signature -- attach evidence of authority to sign)

Name: Jean Radtke - Vice President

Title: 
(typed or printed)
(Signature of Corporate Secretary)

Business address: 1900 West Howard Lane, Austin, Texas 78728

Phone: 512-310-1480 E-mail: jeanr@smithpump.com

END OF SECTION

00 30 04 SELLER COMPLIANCE TO TEXAS SALES TAX CODE

Comply with all requirements of the Texas Sales Tax Code. The Seller hereby certifies that the Contract Price is divided as follows:

Material permanently incorporated into the Goods and resold to the Buyer as defined in Tax Code.	\$	581,558.00
All other charges and costs	\$	
Total (Total must equal the Contract Price)	\$	581,558.00

Seller:

Company Name: Smith Pump Company, Inc.

(typed or printed)

By: 

(Signature -- attach evidence of authority to sign)

Name: Jean Radtke - Vice President

(typed or printed)

Title: 

(Signature of Corporate Secretary)

Business Address: 1900 West Howard Lane, Austin, Texas 78728

Phone: 512-310-1480 E-mail jeanr@smithpump.com

END OF SECTION

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

Smith Pump Co., Inc.

2 Check this box if you are filing an update to a previously filed questionnaire.

Empty checkbox

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

Yes/No checkboxes with 'No' checked

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

Yes/No checkboxes with 'No' checked

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

Yes/No checkboxes with 'No' checked

D. Describe each employment or business relationship with the local government officer named in this section.

4 Signature of person doing business with the governmental entity

Handwritten signature of Elizabeth Smith Wilson, V.P.

Date: 7 March '14

Elizabeth Smith Wilson, V.P.

00 30 06 NON-COLLUSION AFFIDAVIT

STATE OF TEXAS
COUNTY OF Travis

OWNER: City of Pflugerville
100 E. Main, Suite 100
Pflugerville, Texas 78660

CONTRACT: Pfennig Pump Station Improvements Pump, Motor, and VFD Equipment Pre-Purchase

Jean Radtke
_____, being first duly sworn, says that (he/she) is the agent
authorized by the Offeror to submit the attached Proposal.

Affiant further states that the Offeror has not been a party to any collusion among Offerors in
the restraint of freedom of competition by agreement to submit a Proposal at a fixed price or to refrain
from offering; or with any official or employee of the District as to quantity, quality, or price in the
prospective Contract, or any other terms of said prospective Contract; or in any discussion between
Offerors and any official of the District concerning exchange of money or other thing of value for special
consideration in the letting of a Contract.

Company Name: Smith Pump Company, Inc.

(typed or printed)

By: *Jean Radtke*

(Signature -- attach evidence of authority to sign)

Name: Jean Radtke

Title: Vice President
(typed or printed)

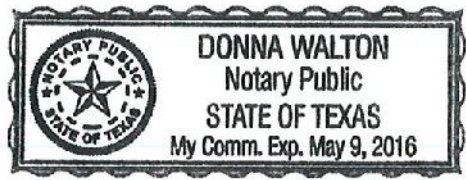
(Signature of Corporate Secretary)

Business address: 1900 West Howard Lane, Austin, Texas 78728

Phone: 512-310-1480 E-mail: jeanr@smithpump.com

SUBSCRIBED AND SWORN BEFORE ME, this 7th day of March, 2014

Notary Public
Donna Walton
My Commission Expires:
May 9, 2016



**SECTION 04 45 16
STATEMENT OF QUALIFICATIONS**

00 45 16 STATEMENT OF QUALIFICATIONS

ARTICLE 1: REQUIREMENTS FOR THE STATEMENT OF QUALIFICATIONS

- 1.01 The Statement of Qualifications must be submitted with the Proposal and include the information described in this section of the Specifications as a minimum. Failure to submit the required information in the Statement of Qualifications may result in the Buyer considering the Proposal non-responsive and result in rejection of the Proposal by the Buyer. Offerors may be required to provide supplemental information if requested by the Buyer to clarify, enhance or supplement the information provided in the Statement of Qualifications.
- 1.02 Offerors must provide the information requested in the Statement of Qualifications using the forms attached to this Section. A copy of these forms can be provided in Microsoft Word to assist with the preparation of the Statement of Qualifications. Information in these forms must be provided completely and in detail. The information in these forms will be used to make direct comparisons with the information provided by other Offerors. Failure to include the information completely and clearly may result in lower scores in the evaluations. Information that cannot be totally incorporated in the form may be included in an appendix to the form. This appendix must be clearly referenced by appendix number in the form, and the appended material must include the appendix number on every sheet of the appendix. The appendix must include only the information that responds to the question or item number to which the appended information applies.
- 1.03 Offerors may provide supplemental information to the Statement of Qualifications such as organizational brochures or other marketing information to help demonstrate their ability to provide best value to the Buyer. This information may not be submitted as a substitute to the information specifically requested in this Section, or in the Statement of Qualifications forms. If this information is included as an appendix to the information requested in Paragraph 1.02 above, the reference must include the specific paragraph or section that applies to that question or item.

ARTICLE 2: EVALUATION CRITERIA

- 2.01 The Buyer will consider the proposed Contract Price, proposed Contract Time, qualifications of the Offerors and their subcontractors and suppliers, exceptions taken to the terms and conditions of the contract, counter offers and other factors as described in this Article to determine which Proposal offers the best value to the Buyer. The Proposals will be evaluated using the following criteria and weighting:

Rating Category	Description	Weighting Value %
A	Ability of the Seller to comply with experience requirements of the Contract Documents.	10
B	Quality and performance of Goods	10
C	Approach for providing Special Services	10
D	Experience in providing warranty service and service after the warranty period has expired.	10

Rating Category	Description	Weighting Value %
E	Proposed dates for delivery of Goods and proven ability to meeting contractual delivery dates.	20
F	Contract Price	40
Total		100

- A. Ability of the Seller to comply with experience requirements of the Contract Documents. Experience must include, as a minimum, successfully providing Goods for at least 5 similar contracts within the last 5 years.
1. Provide general information about the organization as required in Tables 1-4. Limit the narrative portion responding this criterion to 10 pages. Provide a list of contracts completed by the Organization in the last 5 years using copies of Table 5.
- B. Quality and performance of Goods. Provide references for current or recently completed contracts in Table 5 to allow Buyer to assess the quality of Goods provided on these contracts. Quality considerations may include:
- a. The appearance of the completed Goods,
 - b. Amount of warranty or rework required,
 - c. Durability and maintainability of the completed Goods, and
 - d. Quality of manufacturing practices.
2. Offeror may include written mission or vision statements that demonstrate the commitment to quality of Goods, procedures for preparing detailed quality plans or recommendations and awards received commending the organization for the quality of their Goods. This narrative is not to exceed 10 pages.
- C. Approach for providing Special Services. Experience must include, as a minimum, successfully providing Special Services for at least five similar contracts within the last 5 years. Indicate the Contracts for which Special Services were completed by the Organization in the last 5 years on Table 5.
1. Describe organizations approach for providing Special Services and working with Contractors, Designers, Construction Managers and Buyers' operations and maintenance organizations. Limit the narrative portion responding this criterion to 10 pages.
 2. Provide references for current or recently completed contracts in Table 5 to allow Buyer to assess the quality of Special Services provided on these contracts. Quality considerations may include:
 - a. Quality of Special Services,
 - b. Quality of documentation provided,
 - c. Responsiveness to the Buyer's needs during production and testing, and
 - d. Quality of commissioning services and training provided.
 3. Offeror may include written mission or vision statements that demonstrate the commitment to quality of Special Services provided, procedures for preparing detailed

service plans or recommendations and awards received commending the organization for providing Special Services. This narrative is not to exceed 10 pages.

- D. Experience in providing warranty service and service after the warranty period has expired. Experience must include, as a minimum, successfully providing warranty services for at least five similar contracts within the last 5 years. Indicate the Contracts for which extended warranties, or warranties covered by warranty bonds were completed by the Organization in the last 5 years on Table 5.
1. Describe organizations approach for providing warranty services and working with Contractors, Engineers and Buyers' operations and maintenance organizations. Limit the narrative portion responding this criterion to 10 pages.
 2. Provide references for current or recently completed contracts in Table 5 to allow Buyer to assess the quality of warranty services provided on these contracts. Considerations may include:
 - a. Quality of warranty services,
 - b. Responsiveness to the Buyer's needs during warranty period,
 - c. Responsiveness to the Buyer's needs after the warranty period,
 - d. Experience with providing extended warranties, performance guarantees or bonded warranties.
 3. Offeror may include written mission or vision statements that demonstrate the commitment to quality of warranty services provided, procedures for warranty corrections, testimonials from previous Buyers received commending the organization for providing warranty services or services outside any warranty provisions. This narrative is not to exceed 10 pages.
- E. Proposed dates for delivery of Goods and proven ability to meeting contractual delivery dates.
1. Buyer will give consideration to the date for delivery of Goods in the best value determination for the Contract. Buyer may be subject to delay claims from the Contractor if Goods are not delivered and ready for Contractor to install on the date for delivery. The value of delays in delivery of Goods after the date indicated in Section 00 11 16 "Request for Proposals" will be determined by calculating the number of days between Offeror's proposed completion dates and the Buyer's completion dates indicated in Section 00 11 16 "Request for Proposals." This number of days will be multiplied by the Liquidated Damages amounts indicated in the Agreement to determine the value of early completion. This value for late delivery will be used to adjust the Contract Price when evaluating the Proposed Contract Price described in Paragraph F. The calculation is solely for the evaluation of Proposals and does not alter the Contract Price from the amounts included in the Proposal. Seller will be required to pay the full amount of Liquidated Damages as set forth in the Agreement, or as negotiated if the agreed upon delivery date is not met.
 2. Provide information to demonstrate the ability of the Offeror to complete contracts on time. Offerors are to provide a tabulation of all contracts completed by the Offeror within the last 5 years on Table 8 to demonstrate performance in delivering Goods on

time. Comments may be added to the tabulations to indicate the reasons for not meeting delivery dates.

3. Provide narrative information to indicate the number of contracts and dollar volume currently under contract by the organization and the projected completion date of each of these contracts. Describe how the resources dedicated to these contracts will impact the Offeror's ability to effectively complete this contract. This narrative is not to exceed 5 pages.
- F. Proposed Contract Price: The Contract Price offered and demonstrated ability to complete contracts for the Contract Price. Attach the Proposal and the information required to be submitted with the Proposal.
1. The Contract Price will be used in the best value determination and will be the Contract Price awarded unless this amount is changed during negotiations between the Seller and Buyer. Negotiations, if any, will be conducted in accordance with Government Code 2269.155 and will only be for changes in Scope or the terms and conditions of the Contract.
 2. The evaluation will consider the number and percentages of change orders to contract price for past contracts as an indicator of ability to provide Goods and Special Services within the Contract Price. Provide a tabulation of budget performance on all contracts completed by the Offeror within the last 5 years on Table 7 to demonstrate the ability of the Offeror to complete contracts for the Contract Price. Lines may be added beneath contract change order breakdowns to add explanatory comments.

ARTICLE 3: PROPOSAL REQUIREMENTS

- 3.01 Provide one printed copy of the Proposal at the time and place set forth in Section 00 11 16 "Request for Proposals." Prepare the proposal using the referenced tables and narrative descriptions as described in Article 2. Pages are to be 8-1/2 x 11 pages using a minimum font size of 10. A limited number of 11 X 17 sheets may be used, and must be folded to the size of an 8-1/2 x 11 page. Provide a tab to separate materials responding to each of the Criteria A through E described in Article 2.
- 3.02 Provide a digital copy of the Proposal in Portable Document Format (PDF) on a CD, portable drive or other digital recording device. This digital copy is to include all information required to evaluate the Proposal and should match the content of the printed copy of the Proposal. When creating the digital copy:
- A. Create PDF documents from native format files.
 - B. Rotate all pages so that the top of the document appears at the top when opened in PDF viewing software.
 - C. Submit PDF documents with adequate resolution to allow documents to be printed in a format equivalent to the original documents. Documents are to be scalable to allow printing on standard 8-1/2 x 11 or 11 x 17 paper.
 - D. Submit color PDF documents if color is used in the printed version of the documents.

ARTICLE 4: RANKING OF OFFERORS

- 4.01 The Buyer will consider the qualifications of the Offerors, in addition to the proposed Contract Price and Contract Times, when evaluating Proposals to determine which Offeror will provide the best value to the Buyer and will rank each of the Offerors based on the criteria described in Paragraph 2.01. The Buyer reserves the right to waive irregularities in determining the Offerors' qualifications and reserves the right to require the submission of additional information.
- 4.02 The Buyer will give consideration to any exceptions and counter offers included a separate and additional Proposals submitted in accordance with Paragraph 7.03 of Section 00 21 13 "Instructions to Offerors". If the Buyer elects to consider accepting an exception or counter offer, an addendum describing the acceptable exceptions or counter offers will be sent to all Offerors submitting a Proposal on the date for delivering Proposals in Section 00 11 16 "Request for Proposals." Offerors will be invited to submit a best and final offer based on the Contract Documents as amended by this Addendum.
- 4.03 The Offerors may be invited to participate in interviews before or following any addendum requesting best and final offers. The Buyer will consider the information provided in these interviews and reassess the rankings of each Offeror. Buyer will use information from the Statements of Qualifications, the Proposals and the interviews to determine which Proposal offers the best value to the Buyer.
- 4.04 The Buyer has the right to accept a Proposal, which in its judgment offers the best value to the Buyer, reject any and all Proposals, to waive irregularities in the Proposals, or to reject non-conforming, non-responsive, or conditional Proposals. In addition, the Buyer reserves the right to reject any Proposal where circumstances and developments have, in the opinion of the Buyer, changed the qualifications or responsibility of the Offeror.
- 4.05 Material misstatements or misrepresentation in the documentation submitted for evaluation may be grounds for rejection of the Offeror's Proposal. Any such misstatement or misrepresentation, if discovered after award of the contract, may be grounds for immediate termination of the Contract. Additionally, the Offeror will be liable to the Buyer for any additional costs or damages to the Buyer resulting from this termination, including costs and attorney's fees for collecting such costs and damages.
- 4.06 The Buyer will evaluate and rank each Proposal not later than the 45th day after the date of opening the Proposals per Texas Government Code Section 2267.154(b).

Table 1 – General Information

Organization doing business as	Smith Pump Company, Inc.		
Business address of principle office	301 MBB Industrial, Waco, Texas 76712		
Telephone numbers	512-310-1480		
Main number	254 - 776 - 0377		
Website address	www.smithpump.com		
Form of business (check one)	<input checked="" type="checkbox"/> A corporation	<input type="checkbox"/> A partnership	<input type="checkbox"/> An individual
If a Corporation			
Date of incorporation	1962		
State of incorporation	Texas		
Chief Executive Manager's name	L. Granger Smith, P.E.		
President's name	L. Granger Smith, P.E.		
Vice President's name(s)	Jean Radtke		
	Libby Wilson		
Secretary's name	Libby Wilson		
Treasurer's name			
If a Partnership			
Date of organization			
State whether partnership is general or limited			
If an Individual			
Name			
Identify all individuals not previously named which exert a significant amount of business control over the organization			
Indicators of Organization Size			
Average number of current full time employees	75	Average estimate of revenue for the current year	\$20,000,000.00

Table 2 – Organizational Experience

Organization doing business as	Smith Pump Company, Inc.	
Business address of regional office	1900 West Howard Lane, Austin, Texas 78728	
	4624 Martin Luther King Freeway, Fort Worth, Texas 76119	
	5750 N. Sam Houston Parkway E, Houston, Texas 77032	
Name of regional office manager	Jean Radtke - Austin Office	
Telephone numbers	512-310-1480 - Austin	
Main number	254-776-0377 - Waco	
Website address	www.smithpump.com	
Organization History		
List of names that this organization currently, has or anticipates operating under over the history of the organization, including the names of related companies presently doing business: ^{none.}		
Names of organization	From date	To date
List of companies, firms or organizations that own any part of the organization.		
Name of companies, firms or organization.	Percent Ownership	
Experience		
Years' experience with contracts for providing similar Goods and Special Services:		
Has this or a predecessor organization ever defaulted on a contract or failed to complete any contract awarded to it?	No	
If yes provide full details in a separate attachment. See attachment No.		
Has this or a predecessor organization been released from a bid or proposal in the past ten years?	No	
If yes provide full details in a separate attachment. See attachment No.		
Has this or a predecessor organization ever been disqualification as a bidder or offeror by any local, state, or federal agency within the last 5 years?	No	
If yes provide full details in a separate attachment. See attachment No.		
Is this organization or your proposed surety currently in any litigation or contemplating litigation?	Yes	
If yes provide full details in a separate attachment. See attachment No. 1		
Has this or a predecessor organization ever refused to provide Goods or Special Services as defined in the Contract Documents?	No	
If yes provide full details in a separate attachment. See attachment No.		



**SMITH
PUMP
COMPANY, INC.**

301 M&B Industrial
(800) 299-8909 (254) 776-0377

Waco, Texas 76712
FAX (254) 776-0023

March 6, 2014

ATTACHMENT 1

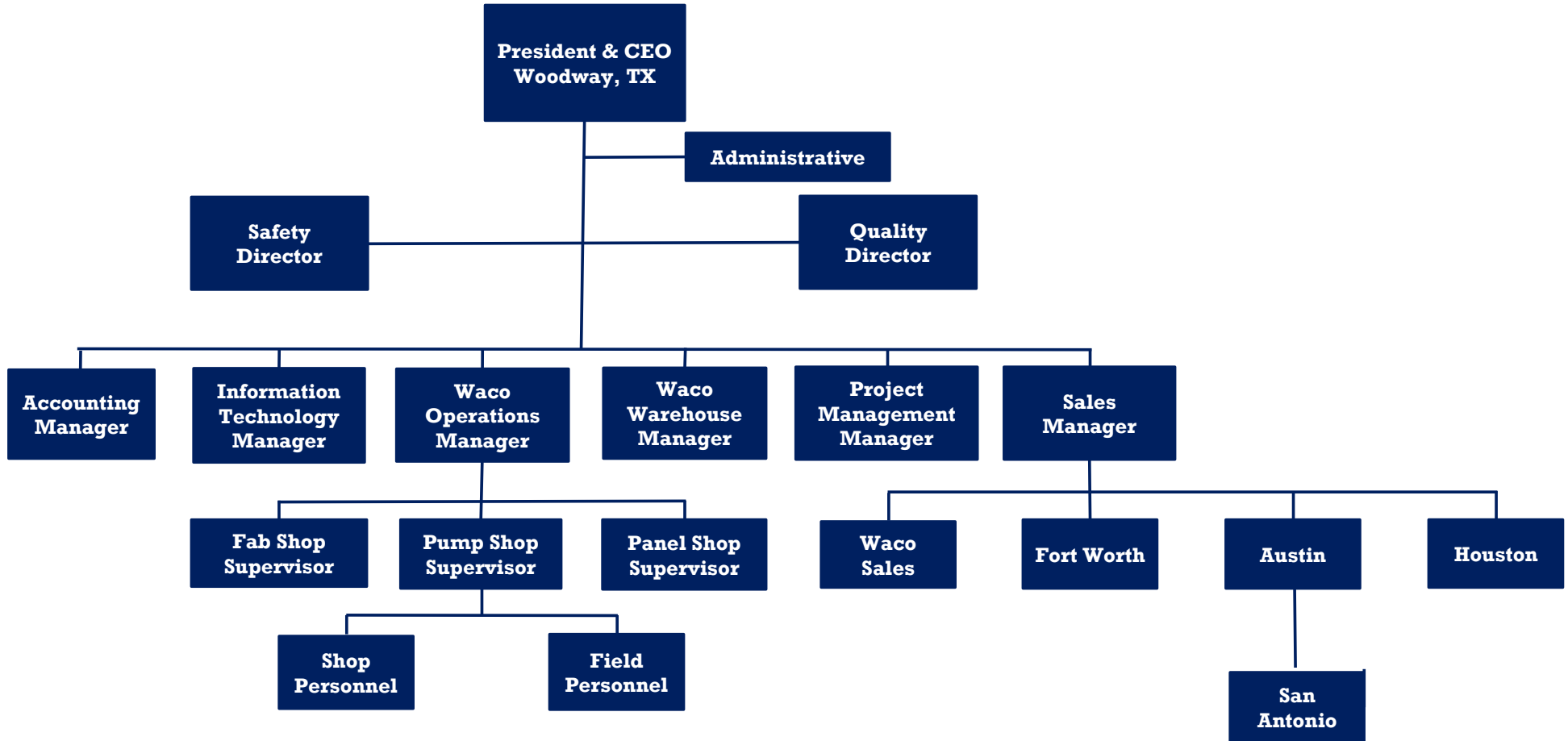
Smith Pump Company has filed a lawsuit against CCA, Inc. for non-payment on the City of Georgetown – Raw Water Intake project.

Jean Radtke
Vice President

1900 Howard Lane West	Austin, Texas 78728	(512) 310-1480	FAX (512) 310-1417
4624 Martin Luther King Frwy	Fort Worth, Texas 76119	(817) 589-2060	FAX (817) 595-4900
5750 North Sam Houston Pkwy East, Suite #1103	Houston, Texas 77032	(713) 997-8647	FAX (281) 912-6042
13126A Lookout Ridge	San Antonio, Texas 78233	(210) 656-0530	FAX (210) 656-2372

Table 3 – Organizational Structure

Organization doing business as:	Smith Pump Company, Inc.	
Proposed organization		
Provide a brief description of the managerial structure of the organization and illustrate with an organizational chart. Include the title and names of key personnel for this Contract. Include this chart as an attachment to this description. See attachment No. 2		
<p>Smith Pump Company's main facility is located in Waco, Texas and is managed by L. Granger Smith, P.E. All fabrication, blasting and coating, and repair work is completed under our Operations Manager, Larry Hernandez. All accounting is overseen by Chris George, Accounting Mgr. Clinton Tabor, P.E. manages our project management group and is responsible for submittal, O&Ms, estimating and design for the company. David McDaniel manages our main warehouse and inventories in our Waco facility. In addition, Smith Pump has four (4) branch offices in Fort Worth, Austin, San Antonio and Houston. For this project, Jean Radtke as branch manager over the Austin office would oversee the project. Darrel Mize is our territory salesman for the Austin area. Jose Reyna is our territory Operations Manager for the Austin area.</p>		
Provide a brief description of the experience and qualifications of the organization's management team, including individuals that will be directly involved in the Contract. Describe the individuals that are authorized to execute Contract Documents, Change Orders or receive payment for the organization. Include a copy of a board resolution or other documentation as appropriate for the structure of the company authorizing these individuals to conduct business on behalf of the organization. See attachment No. 3		
<p>Granger Smith is a mechanical engineer with over 30 years in the pump industry. He is directly involved in projects at all locations around the State of Texas. Jean Radtke has over 30 years in the pump industry and is directly involved in projects in the Austin, San Antonio, Corpus Christi, Laredo and Valley. Darrel Mize has over 30 years in the pump industry and has been responsible for the Austin territory since 2002. Jose Reyna has over 15 years in the mechanical seal industry and has recently joined Smith Pump as Operations Manager for the Austin territory and south. His experience is working in plants to facilitate longer seal life through proper maintenance and application within pumps.</p>		
Surety References		
Name:	SureTec Insurance Company	Telephone (main number): 866-732-0099
Mailing address (principal place of business):	1330 Post Oak Blvd. Houston, Texas 77056	Telephone (for notice of claim): 866-732-0099
Physical address(principal place of business):	1330 Post Oak Blvd. Houston, Texas 77056	Local Agent for Surety:
		Name: Gordon Riley Insurance Agency, Inc.
		Address: 820 Lake Air Dr. Waco, Texas 76710
		Telephone: 254-776-1290 eMail:
Surety is a corporation organized and existing under the laws of the state of: Texas		
Is surety authorized to provide surety bonds in the state of Texas? Yes		
Is surety listed in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury? Yes		





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(800) 299-8909 (254) 776-0377

Waco, Texas 76712
FAX (254) 776-0023

March 6, 2014

ATTACHMENT 3

AUTHORIZED REPRESENTATIVE

I hereby certify that it was **RESOLVED** by a quorum of the directors of Smith Pump Company, Inc., meeting on the 1st day of January 2004 that I, Jean Radtke, hereby is authorized to act on behalf of Smith Pump Company, Inc., as its representative to conduct all business transactions in the States of Texas and Oklahoma.

That all above resolution was unanimously ratified by the Board of Directors at said meeting and that the resolution has not been rescinded or amended and is now in full force and effect; and;

In authentication of the adoption of this resolution, I subscribe my name and affix the seal of the corporation this 1st day of January, 2004.

**Jean Radtke
Vice President**

Acknowledgement of receipt of Addendum 1 and 2.

1900 Howard Lane West	Austin, Texas 78728	(512) 310-1480	FAX (512) 310-1417
4624 Martin Luther King Frwy	Fort Worth, Texas 76119	(817) 589-2060	FAX (817) 595-4900
5750 North Sam Houston Pkwy East, Suite #1103	Houston, Texas 77032	(713) 997-8647	FAX (281) 912-6042
13126A Lookout Ridge	San Antonio, Texas 78233	(210) 656-0530	FAX (210) 656-2372

Table 4 – Contract Experience and Resources

Organization doing business as:	Smith Pump Company
Contracts	
Provide a narrative description (not to exceed 10 pages) of your organizations approach to completing this contract to provide best value for the Buyer. Including a description of your approach in the following areas:	
<ol style="list-style-type: none">1. Contract administration2. Management of subcontractors and suppliers3. Time management4. Cost control5. Quality management6. Safety7. Managing changes to the contracts8. Managing product delivery9. Providing start-up services.10. Providing training on operation and maintenance of Goods.11. Providing service on warranty corrections.12. Meeting HUB / MWBE Participation Goal	Attachment 4



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ATTACHMENT 4

Table 4 – Contracts

1. Contract administration: Contracts will be negotiated with Granger Smith, President.
2. Management of subs and suppliers: Project management will be facilitated by Jean Radtke, Vice President. All coordination between Smith Pump and suppliers, submittals, purchase orders, deliveries and O&M manuals are the responsibility of the project manager. Field service, startup and field testing will be coordinated through the PM and scheduled by Jose Reyna, Operations Manager for this territory.
3. Time management: This contract has a 230 day (32.85 week) contract from NTP. The critical path vendor is Flowserve. Flowserve is quoting 2-3 weeks for submittal and 28-30 weeks for delivery after release for production.

Smith Pump has had success compressing the schedule through the use of casting submittals. The casting submittal includes sufficient information to allow a review and approval of the materials and performance. The delivery schedule will begin at the castings release. Smith Pump will follow-up with full submittal for review. For this contract, a casting submittal would require approval prior to issuance of the Notice to Proceed in order to meet the contract time.
4. Cost Control: The project manager is responsible for cost control. Costs can be controlled through careful planning of the schedule, materials and field service.
5. Quality Management: Smith Pump Company has a quality management system in place and is certified ISO 9001. A copy of that QM system can be supplied at your request.

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13126A Lookout Ridge	San Antonio, Texas 78233	(210) 656-0530	FAX (210) 656-2372

6. Safety: Operations managers at Smith Pump train bi-monthly on safety issues and annually in a 2-day session in our Waco shop. Our field service personnel are equipped with the proper protective devices and trained to recognize and prevent safety issues.

ATTACHMENT 2

7. Managing changes in the contracts: Any changes to the contract will be managed by the project manager. No changes will be made without a full assessment that includes fiscal changes and schedule impact.
8. Managing product delivery: Smith Pump project managers attend a weekly conference call with Flowserve's PMs to review and discuss schedules of current projects. We have seen a dramatic improvement in deliveries since initiating this process.
9. Providing start-up services: Our service personnel have many years experience with field service on vertical turbine pumps. A number of field service trips are required on this project from levelling the top can flange through the final operational test. Our operations manager will select the proper personnel to complete the field service tasks.
10. Providing training on operations and maintenance of Goods: Smith Pump invested in a "training" trailer 5 years ago that can be used to travel to cities as needed. The trailer includes a vertical turbine bowl assembly that we teardown and rebuild during our training sessions. Our training person for this territory is Darrel Mize with over 30 years in the municipal pump industry.
11. Providing service on warranty considerations: Our service department has the resources to respond to warranty requests. We have service within 25 miles of the jobsite out of our Austin shop. In addition, we have service capability out of Waco and San Antonio.
12. Meeting HUB/MWBE participation goal: I am unaware of a minority goal on this project. Smith Pump and our vendors are not HUB/MWBE certified companies.

Table 5 – Current Contracts and Contracts Completed within the last 5 Years

Attachment 5

Buyer:	City of Amarillo			Contract name	Osage Water Treatment Plant - High Service and Transfer Pump Stations	
General description of Goods provided:		(6) Flowserve 32ENM 3-stage vertical turbines with 1500hp/900rpm/4000v vertical solidshaft motors.				
General description of Special Services provided:		Soleplate level before grouting, starting and adjusting impellers, vibration analysis, operational tests				
Contract Price:	\$1,884,000.00	Production Facility	Flowserve - Taneytown, Maryland		Project Manager	James Schumacher
Date Goods delivered	March 2011	Assembly Facility	Smith Pump Company - Waco, Texas		Quality Control Manager	James Schumacher
Reference contact information (listing names indicates approval to contacting the names individuals as a reference)						
	Name	Title/ position	Organization	Telephone	E-mail	
Buyer	Tony Hopkins	Water Production Superintendent	City of Amarillo	806-378-3019	tony.hopkins@amarillo.gov	
Engineer	Lance Ferland		HDR	972-457-1368	lance.ferland@hdrinc.com	
Construction Manager	Jeff Cohen	Project Manager	Garney Construction	602-470-0001	jcohen@garney.com	
Buyer	Colorado River MWD			Contract name	Ward County Water Supply Expansion	
General description of Goods and Special Services provided:		(6) Flowserve 28" bowls VTPs with VSS motors; services include barrel levelling, barrel plumb, starting, lubricating, adjusting impellers, vibration checks and field testing.				
Contract Price:	\$2,210,854.00	Production Facility	Flowserve - Taneytown, Maryland		Project Manager	Matt Ramburger
Date Goods delivered	September-October, 2012	Assembly Facility	Smith Pump Company - Waco, Texas		Quality Control Manager	Matt Ramburger
Reference contact information (listing names indicates approval to contacting the names individuals as a reference)						
	Name	Title/ position	Organization	Telephone	E-mail	
Buyer	David Salazar	CRMWD Contact	Colorado River MWD	432-213-0352	dsalazar@crmwd.org	
Engineer	Nicholas Lester		Cheese & Nichols	817-735-7303	ncl@cheese.com	
Construction Manager	Marcus Grace	Superintendent	Garney Construction	816-536-6585	mgrace@garney.com	
Buyer	City of Georgetown			Contract name	Sun City Pump Station	
General description of Goods and Special Services provided:		Addition of 4th Flowserve 20EKH 4-stg with 400hp/1200rpm/460v VSS motor and 30" suction barrel. Barrel levelling and plumb, starting, adjusting, lube, vibration and field testing.				
Contract Price:	\$283,000.00	Production Facility	Flowserve - Taneytown, Maryland		Project Manager	Clinton Tabor
Date Goods delivered	May, 2010	Assembly Facility	Smith Pump Company - Waco, Texas		Quality Control Manager	Clinton Tabor
Reference contact information (listing names indicates approval to contacting the names individuals as a reference)						
	Name	Title/ position	Organization	Telephone	E-mail	
Buyer	Michael Hallmark	Project Manager	City of Georgetown	512-930-3569	michael.hallmark@georgetown.org	
Engineer:	Allen Woelke		Camp, Dresser & McKee	512-346-1100	WoelkeAD@cdmsmith.com	
Construction Manager	Trevor Thompson	Project Manager	CDM Constructors, Inc.	303-383-2300	ThomsonTH@cdmsmith.com	



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ATTACHMENT 5

TABLE 5

Smith Pump Company does not track projects with special services or warranty work. Our company has been in business for over 50 years and we believe a good part of our success comes from our reliability to correct problems. Our commitment is a close relationship with our customers long after the contractor has left the jobsite. Our Waco facility has many employees with longevity of over 30 years. That knowledge and experience is essential to solving problems in the field. Our fabrication shop in Waco has qualified welders and fitters; our pump repair shop includes many fine mechanics and our service engineering group handles complex new pump as well as repair pump projects.

Field service is our strong point as all of five (5) of our offices include repair shops and field service capabilities. Our service personnel use laser alignment tools, vibration meters, ammeters, voltmeters, machinist's levels and dial indicators. We have three (3) service engineers in Waco capable of full operational testing with calibrated flowmeters and gauges. Our project management group includes design engineers for new or modified equipment as well as equipment review through lateral and torsional analyses.

Jean Radtke
Vice President

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Table 6 - Contract Information

Buyer	Garney Construction		Contract name	Colorado River MWD	
General description of contract Transmission and Odessa Pump Stations Goods: (4) Flowserve 25EKM 5-stage vertical turbine pumps with 1500hp/3ph/4000v/1200rpm VSS motors and (2) Flowserve 23EPM 3-stage vertical turbine pumps with 600hp/1200rpm/3ph/460v VSS motors. Fabrications: 18" and 24" columns and discharge heads; 42" and 48" diameter suction barrels in our Waco fabrication facility. Services: Field welding and levelling of top barrel flanges, starting and adjusting pre-startup, impeller sets, bump tests, field runouts on shafts, motor uncoupled run tests, pump startup and operational testing.					
Contract Budget and Schedule Performance					
Budget history			Schedule performance		
	Amount	% of Bid Amount		Date	Days
Bid	2,215,854.00		Notice to Proceed	11/23/11	0
Change orders	0.00		Contract Delivery date at Notice to Proceed	10/17/12	327
Buyer enhancements	0.00		Change Order authorized Delivery date	0	0
Design issues	-----		Actual / estimated Substantial Completion date - startup	12/21/12	392
Total	2,215,854.00		Comments:		
Final cost	2,215,854.00				
Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference)					
	Name	Title/ position	Organization	Telephone	E-mail
Buyer	David Salazar	CRMWD Contact	Colorado River MWD	432-213-0352	dsalazar@crmwd.org
Designer	Nicholas Lester		Freese & Nichols	817-735-7393	ncl@freese.com
Construction Manager	Marcus Grace	Superintendent	Garney Construction	816-536-6585	mgrace@garney.com
Surety					
Issues / disputes resolved or pending resolution by arbitration, litigation or dispute review boards					
Number of issues resolved:		Total amount involved in resolved issues:		Number of issues pending:	
				Total amount involved in resolved Issues:	

Table 7 – Demonstration of Budget Performance

Smith Pump Company does not track budget performance. This information is not readily available to our customers.

Organization doing business as:		Smith Pump Company, Inc.					
Provide information on all contracts completed by the Organization within the last 5 years.							
Buyer Name	Contract Description	Original Contract Price	Buyer Enhancements	Unforeseen Conditions	Design Issues	Total Changes	Percent Changes

Table 8 – Demonstration of On-time Performance

Organization doing business as:				
Provide information on all contracts completed by the Organization within the last 5 years.				
Buyer Name	Contract Description	Original Delivery Date for Goods	Amended Delivery Date for Goods	Actual Delivery Date for Goods

Attachment 6

Project #	Project Contractor	Project Owner	Original		
			Delivery Date of Goods	Amended Delivery Date of Goods	Actual Delivery Date of Goods
167488	Calm-Veterans Administration	Calm-Veterans Administration	8/2/2012	8/2/2012	8/2/2012
167621	City of Burnet - Move Sewer Plant Well to New Well	City of Burnet	8/23/2012	8/23/2012	8/23/2012
167690	Bell Co. WCID #1	Bell Co. WCID #1	9/14/2012	9/14/2012	9/14/2012
167612	City of Austin	City of Austin	9/28/2012	9/21/2012	9/21/2012
167552	City of Riesel	City of Riesel	11/1/2012	10/31/2012	10/31/2012
167553	City of Riesel	City of Riesel	11/1/2012	10/31/2012	10/31/2012
167949	EBC Construction, LLC	Holiday Inn - Lakeway	11/5/2012	11/5/2012	11/5/2012
167451	City of Taylor	City of Taylor	11/30/2012	11/30/2012	11/30/2012
167660	Travis Co Parks	Travis Co Parks	9/27/2012	12/6/2012	12/6/2012
167934	City of Blossom	City of Blossom	12/10/2012	12/10/2012	12/10/2012
168003	Rani Arni	Rani Arni	12/12/2012	12/11/2012	12/11/2012
168114	FLOWSERVE	Flowserve-SAWS Dos Rios	12/21/2012	12/21/2012	12/21/2012
168177	Texas Parks & Wildlife - Game Warden	Texas Parks & Wildlife - Game Warden	1/31/2013	1/10/2013	1/10/2013
167972	Camp For All Foundation	Camp For All Foundation	1/14/2013	1/14/2013	1/14/2013
168073	Kingsland MUD	Kingsland Mud	1/31/2013	1/23/2013	1/23/2013
168269	City of La Grulla	City of La Grulla	1/25/2013	1/25/2013	1/25/2013
166918	Bar Constructors	Dallas / Trinity Watershed / Pavaho Purr	1/25/2013	1/25/2013	1/25/2013
167863	Angelina WSC	Angelina WSC	1/31/2013	1/31/2013	1/31/2013
168091	Bistone Municipal Water Supply District	Bistone Municipal Water Supply District	2/7/2013	2/7/2013	2/7/2013
168294	Campos Utilities, Inc. Lvd	Executive Suites Hotel-Lift Station #1	2/8/2013	2/8/2013	2/8/2013
168313	C.A.R.E. Inc.	C.A.R.E. Inc.	3/31/2013	2/9/2013	2/9/2013
168154	Tarrant Regional Water District - Benbrook BB2 Reducer	Tarrant Regional Water District	2/20/2013	2/20/2013	2/20/2013
168065	Waco I.S.D.	Waco I.S.D.	3/1/2013	2/28/2013	2/28/2013
168176	City of Copperas Cove	City of Copperas Cove - Mickan B.S.	3/8/2013	3/8/2013	3/8/2013
168476	Firestone & Robertson Distilling Co.	Firestone & Robertson Distilling Co.	3/14/2013	3/14/2013	3/14/2013
168512	Pirtek Meacham	Pirtek Meacham	3/20/2013	3/20/2013	3/20/2013
168510	City of Denton	City of Denton	3/26/2013	3/20/2013	3/20/2013
168067	York's Pumping Service	York's Pumping Service	3/21/2013	3/21/2013	3/21/2013
167764	City of Odessa	City of Odessa - Golder Rd. PS	3/29/2013	3/29/2013	3/29/2013
168537	Paradise I.S.D.	Paradise ISD	4/4/2013	4/4/2013	4/4/2013
168459	City of Denton	City of Denton	4/8/2013	4/8/2013	4/8/2013
168554	Buster Russell Construction	Buster Russell Construction	4/12/2013	4/8/2013	4/8/2013
168444	Upper Trinity Regional Water Dist. - FM D5436SMV	Upper Trinity Regional Water	4/12/2013	4/12/2013	4/12/2013
168615	Alliance for Children	Alliance for Children	4/12/2013	4/12/2013	4/12/2013
168636	Brandon & Clark, Inc	Brandon & Clark, Inc	4/17/2013	4/12/2013	4/12/2013
168591	Medtronic, Inc.	Medtronic, Inc.	5/1/2013	4/24/2013	4/24/2013
168507	Cliett Refrigeration	Cliett Refrigeration	4/30/2013	4/30/2013	4/30/2013

168451	City of Groesbeck	City of Groesbeck	5/1/2013	5/1/2013	5/1/2013
168337	TIMBERVIEW GOLF CLUB	TIMBERVIEW GOLF CLUB	5/3/2013	5/3/2013	5/3/2013
168777	Francis Bump	Francis Bump	5/13/2013	5/13/2013	5/13/2013
168589	COPPERAS COVE I.S.D	COPPERAS COVE I.S.D	5/17/2013	5/17/2013	5/17/2013
168700	Central Texas Security & Fire Equipment	Central Texas Security & Fire Equipment	5/31/2013	5/31/2013	5/31/2013
168821	Airport Shell	Airport Shell	5/31/2013	5/31/2013	5/31/2013
168840	Comet Cleaners & Laundry	Comet Cleaners & Laundry	5/31/2013	5/31/2013	5/31/2013
168790	Black & Veatch - New Braunfels Field Testing (6) VTPs	New Braunfels Utility	5/31/2013	5/31/2013	5/31/2013
168498	Bell Co. WCID #3	Bell Co. WCID #3	6/7/2013	6/7/2013	6/7/2013
168752	Business Services Company - Exelon Wolf Hollow RWP	Exelon - Wolf Hollow Station	6/7/2013	6/7/2013	6/7/2013
168774	City of Calvert	City of Calvert	6/7/2013	6/7/2013	6/7/2013
168893	Campos Utilities, Inc. Lvd	Campos Utilities, Inc. Lvd-Executive Suite	6/10/2013	6/10/2013	6/10/2013
168924	Sonoco Flexible Packaging	Sonoco Flexible Packaging	6/11/2013	6/11/2013	6/11/2013
168610	Angelina WSC - Repair Aurora 3x4x10 HSC	Angelina WSC	6/21/2013	6/21/2013	6/21/2013
168848	City of Itasca - Replace HPGH500M2-2	City of Itasca	6/28/2013	6/28/2013	6/28/2013
168892	Jacobs-Cathy Company	Jacobs-Cathy Co.-Fish Pond Medical	6/28/2013	6/28/2013	6/28/2013
168569	City of Bryan	City of Bryan - Still Creek Plant	6/28/2013	6/28/2013	6/28/2013
168978	Double Eagle Mechanical	Double Eagle Mechanical	7/2/2013	7/2/2013	7/2/2013
169054	Waco Family Entertainment	Waco Family Entertainment	7/9/2013	7/9/2013	7/9/2013
168083	Central Texas W.S.C.	Central Texas W.S.C.	7/10/2013	7/10/2013	7/10/2013
169065	F.M. SHORT CO.	F.M. Short	7/11/2013	7/11/2013	7/11/2013
169089	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	7/16/2013	7/16/2013	7/16/2013
168753	City of McGregor	City of McGregor - Johnson Dr. Well	7/19/2013	7/16/2013	7/16/2013
169141	Terry Backiel	Terry Backiel	7/31/2013	7/26/2013	7/26/2013
169028	City Of Pasadena	City Of Pasadena	7/30/2013	7/30/2013	7/30/2013
166982	BRB Contractors, Inc.	City of Dumas - WWTP Expansion	7/30/2013	7/30/2013	7/30/2013
169058	Hillcrest Hospital	Hillcrest Hospital	7/31/2013	7/31/2013	7/31/2013
169164	Russell Langbein	Russell Langbein	7/31/2013	7/31/2013	7/31/2013
169163	City Of Corpus Christi	City Of Corpus Christi-Sand Dollar	8/1/2013	8/1/2013	8/1/2013
169094	Eagle Contracting, L.P.	Trinity River Authority - PS 13	8/2/2013	8/2/2013	8/2/2013
169007	HOLT EQUIPMENT	Holt Equipment	8/2/2013	8/2/2013	8/2/2013
168842	City of Copperas Cove	City of Copperas Cove	8/2/2013	8/2/2013	8/2/2013
169171	Embree Construction	Embree Construction	8/2/2013	8/2/2013	8/2/2013
166311	City of Fort Worth	City of Fort Worth - Como Pump Station	4/26/2013	8/6/2013	8/6/2013
168406	City of Fort Worth RS-14	City of Fort Worth - Village Creek WWTP	5/23/2013	8/6/2013	8/6/2013
169092	City of Austin	Lost Creek MUD LS #1	8/9/2013	8/9/2013	8/9/2013
169203	CITY OF WOODWAY	CITY OF WOODWAY	8/9/2013	8/9/2013	8/9/2013
169197	Eagle Contracting, L.P.	Trinity River Authority - CRWWP	8/16/2013	8/14/2013	8/14/2013
168286	Capps-Capco Construction, Inc.	City of Mount Pleasant	7/31/2013	8/22/2013	8/22/2013
169046	CANADIAN RIVER M.W.A.	CANADIAN RIVER M.W.A.	8/29/2013	8/29/2013	8/29/2013
169071	Waco Family Entertainment	Waco Family Entertainment	8/30/2013	8/30/2013	8/30/2013

168985	Duders Plumbing	Duder's Plumbing	8/30/2013	8/30/2013	8/30/2013
168803	City of Waco - Church Road L.S.	City of Waco	8/30/2013	8/30/2013	8/30/2013
169260	International Marina	International Marina	8/30/2013	8/30/2013	8/30/2013
168024	City of Valley Mills	City of Valley Mills	8/30/2013	8/30/2013	8/30/2013
168274	Upper Trinity Regional Water Dist. - HSP #2 Repair	Upper Trinity Regional Water	8/30/2013	9/3/2013	9/3/2013
169336	Love's Country Stores, Inc.	Love's Country Stores, Inc.	9/6/2013	9/5/2013	9/5/2013
169338	City of Garland	City of Garland - Apollo Rd	9/13/2013	9/6/2013	9/6/2013
168645	Trinity River Authority - CRWS	Trinity River Authority - Central Wastew	9/20/2013	9/20/2013	9/20/2013
169334	City of Lovelady	City of Lovelady	9/30/2013	9/24/2013	9/24/2013
169327	WCID Point Venture	WCID Point Venture	9/30/2013	9/30/2013	9/30/2013
168714	Badboy's Contracting Service	City of Many Pump Opportunities / Lake	9/30/2013	9/30/2013	9/30/2013
169106	City of Horseshoe Bay	City of Horseshoe Bay	9/30/2013	9/30/2013	9/30/2013
169426	Ocatillo Properties	Ocatillo Properties	9/27/2013	10/4/2013	10/4/2013
169310	Sturdivant-Progressive W.S.C.	Sturdivant-Progressive W.S.C.	10/11/2013	10/11/2013	10/11/2013
169308	Sturdivant-Progressive W.S.C.	Sturdivant-Progressive W.S.C.	10/11/2013	10/11/2013	10/11/2013
169452	Maverick Tube Corporation	Tenaris Global Services (USA) C	Maverick Tube Corporation	Tenaris Glob	10/16/2013
169139	Marquis @ Stonegate	Marquis @ Stonegate	10/18/2013	10/18/2013	10/18/2013
169509	Cross Timbers Water Supply Corp.	Cross Timbers Water Supply Corp.	10/21/2013	10/21/2013	10/21/2013
169456	A & P Water Supply Corp.	A & P Water Supply Corp.	10/23/2013	10/23/2013	10/23/2013
167927	Tom Day Company - contract	Tom Day Company	10/24/2013	10/24/2013	10/24/2013
169566	Marlin Wilson	Marlin Wilson	10/25/2013	10/24/2013	10/24/2013
169587	Hollands Quarters W.S.C.	Hollands Quarters W.S.C.	10/28/2013	10/28/2013	10/28/2013
169485	Colorado River M.W.D. - Replace Top Shaft & Adj Nut	Colorado River M.W.D.	10/30/2013	10/30/2013	10/30/2013
169369	Southpark Mobile Home Estates	Southpark Mobile Home Estates	10/31/2013	10/31/2013	10/31/2013
169368	City of Fort Worth - Water Production Department	Fort Worth - Trinity Clear Fork VTP Spray	11/1/2013	11/1/2013	11/1/2013
169618	City of Fairfield	City of Fairfield	11/1/2013	11/1/2013	11/1/2013
168570	City of Bryan	City of Bryan - Still Creek Plant	11/1/2013	11/1/2013	11/1/2013
169625	City of Austin	City of Austin - Bentliff Lift Station	11/1/2013	11/2/2013	11/2/2013
169513	LAYNE Heavy Civil	Layne	11/7/2013	11/7/2013	11/7/2013
169323	City of Houston - Genoa - 7.5HP Ebara	City of Houston - Genoa	11/14/2013	11/14/2013	11/14/2013
169255	City of Houston	City of Houston - Turkey Creek	11/14/2013	11/14/2013	11/14/2013
168760	City of Grand Prairie	City of Grand Prairie	11/19/2013	11/19/2013	11/19/2013
169607	Golden Root Trees	Golden Root Trees	12/6/2013	12/6/2013	12/6/2013
169600	M.E.N. Water Supply Corp.	M.E.N. Water Supply Corp.	12/13/2013	12/13/2013	12/13/2013
168832	Archer Western Contractors, Inc.	Archer Western Contractors, Inc.	12/12/2013	12/17/2013	12/17/2013
169495	CITY OF ARLINGTON	City of Arlington	12/17/2013	12/17/2013	12/17/2013
169838	Ratliff Ready-Mix	Ratliff Ready-Mix	12/19/2013	12/19/2013	12/19/2013
169835	Phil Trew	University Moble Home Park	12/20/2013	12/20/2013	12/20/2013
169653	Ross W.S.C.	Ross W.S.C. - Well #3	12/20/2013	12/20/2013	12/20/2013
169544	FLOWSERVE	NTMWD - WTP 1-4 Ozonation	12/26/2013	12/26/2013	12/26/2013
169645	Texas Westmoreland Coal Co.	Texas Westmoreland Coal Co.	1/10/2014	12/31/2013	12/31/2013

169883	RIDGLEA PRESBYTERIAN CHURCH	RIDGLEA PRESBYTERIAN CHURCH	1/3/2014	1/3/2014	1/3/2014
169481	City of Houston	City of Houston - Chatwood PS	1/10/2014	1/10/2014	1/10/2014
169901	City of Fort Worth - Parks & Community Services	City of Fort Worth - Parks & Community	1/23/2014	1/15/2014	1/15/2014
169604	City of Crockett	City of Crockett	1/17/2014	1/17/2014	1/17/2014
169958	City of Buckholts	City of Buckholts	1/31/2014	1/31/2014	1/31/2014
169570	City of Mineral Wells	City of Mineral Wells	1/31/2014	1/31/2014	1/31/2014
169557	CITY OF WOODWAY	CITY OF WOODWAY	1/31/2014	1/31/2014	1/31/2014
169592	City of Gatesville	City of Gatesville	1/31/2014	1/31/2014	1/31/2014
170065	Blue Linx	Blue Linx	2/14/2014	2/14/2014	2/14/2014
170060	Love's Country Stores, Inc.	Love's Country Stores, Inc.	2/18/2014	2/14/2014	2/14/2014
170089	GRANGER SMITH	GRANGER SMITH	2/18/2014	2/18/2014	2/18/2014
169912	Robinson I.S.D.	Robinson I.S.D.	2/21/2014	2/21/2014	2/21/2014
170135	FLOWSERVE	Trinity River Authority - Influent PS-6	3/7/2014	2/28/2014	2/28/2014
163328	Eagle Contracting, L.P.	Trinity River Authority - PS-7,13,&13A	3/4/2014	3/4/2014	3/4/2014
170150	Denton County FWSD 8C	Denton County FWSD 8C - Frisco Ranch	3/21/2014	3/4/2014	3/4/2014
170158	Ryder & Hillshire Brands	Ryder & Hillshire Brands	3/7/2014	3/5/2014	3/5/2014
167567	Rani Arni	Rani Arni	9/11/2012	8/15/2012	8/14/2012
167386	Pebble Creek Golf	Pebble Creek Golf - Irrigation P.S.	8/22/2012	8/22/2012	8/21/2012
167741	Donald Wyne	Donald Wyne	10/31/2012	9/21/2012	9/20/2012
167966	Central Texas Water Maintenance	Cibelo Lift Station- Rehab	11/16/2012	11/16/2012	11/15/2012
167848	City of Caldwell - 40MP SmithPrime Cover Replacement	City of Caldwell	12/31/2012	12/21/2012	12/20/2012
167901	City of Burnet	City of Burnet - Inks Lake HSPS	1/9/2013	1/9/2013	1/8/2013
168163	Terry Pittman	Terry Pittman	1/9/2013	1/9/2013	1/8/2013
168169	Madison Warehouse	Madison Warehouse	1/25/2013	1/18/2013	1/17/2013
168376	Cornerstone Plumbing	Cornerstone Plumbing	2/15/2013	2/15/2013	2/14/2013
168183	City of Waco - River Side Control Panel - Duplex	City of Waco	2/28/2013	2/28/2013	2/27/2013
168503	City of Fort Worth	City of Fort Worth-Village Creek	3/20/2013	3/20/2013	3/19/2013
168514	Fort Worth Northbrook, Ltd.	Fort Worth Northbrook, Ltd.	3/26/2013	3/22/2013	3/21/2013
168168	City of Heath	City of Heath	4/1/2013	3/28/2013	3/27/2013
168271	Tarrant Regional Water District - RC #1 Top Bearing	Tarrant Regional Water District	3/29/2013	3/29/2013	3/28/2013
168739	McCarthy Building Companies, Inc.	McCarthy Building Companies	5/3/2013	5/3/2013	5/2/2013
168672	City of Lago Vista	City of Lago Vista	5/10/2013	5/10/2013	5/9/2013
168699	Round Rock Grinder Pump and Panel	City of Round Rock	5/10/2013	5/10/2013	5/9/2013
168320	City of Gatesville	City of Gatesville	5/10/2013	5/10/2013	5/9/2013
168499	City of Farmers Branch	City of Farmers Branch	5/24/2013	5/24/2013	5/23/2013
169070	The Vineyard @ Florence	The Vineyard @ Florence	7/12/2013	7/12/2013	7/11/2013
169032	Medtronic, Inc.	Medtronic, Inc.	7/19/2013	7/19/2013	7/18/2013
168369	Mars	Mars	7/26/2013	7/24/2013	7/23/2013
169127	City of Fort Worth - City Hall	City of Fort Worth - City Hall	7/26/2013	7/26/2013	7/25/2013
168502	169189	City of Coppell	8/8/2013	8/8/2013	8/7/2013
169077	City of Riesel	City of Riesel	8/30/2013	8/30/2013	8/29/2013

168303	City of Stamford	City of Stamford - Diversion P.S.	8/31/2013	8/31/2013	8/30/2013
168975	City of Mount Vernon	City of Mt. Vernon	9/13/2013	9/13/2013	9/12/2013
169363	Federal Corrections Institution-Ft. Worth	Federal Corrections Institution-Ft. Worth	10/3/2013	10/3/2013	10/2/2013
169525	City of Fort Worth - Parks & Community Services	City of Fort Worth - Parks & Community	10/25/2013	10/22/2013	10/21/2013
169434	Truck & Travel	Truck & Travel	10/25/2013	10/25/2013	10/24/2013
169439	Lakewood Estates	Lakewood Estates	10/31/2013	10/29/2013	10/28/2013
167433	CDM Constructors Inc.	Rio Grande City - Raw Water	10/31/2013	10/31/2013	10/30/2013
169611	City of Arlington - RWPS	City of Arlington	11/7/2013	11/1/2013	10/31/2013
169563	Steve Luning	Steve Luning	11/8/2013	11/8/2013	11/7/2013
169582	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	11/8/2013	11/8/2013	11/7/2013
169355	City of Crockett	City of Crockett	11/22/2013	11/22/2013	11/21/2013
169780	City of Sunset Valley	City of Sunset Valley	12/17/2013	12/17/2013	12/16/2013
169697	City of Robinson	City of Robinson	12/23/2013	12/20/2013	12/19/2013
168162	FLOWSERVE - Springfield 3 & 4	Flowserve - Springfield	12/31/2013	12/31/2013	12/30/2013
169779	Austonian	Austonian	1/10/2014	1/10/2014	1/9/2014
169905	Fort Worth Northbrook, Ltd.	Fort Worth Northbrook, Ltd.	1/17/2014	1/15/2014	1/14/2014
169516	Medtronic, Inc.	MPROC Spinal	1/17/2014	1/17/2014	1/16/2014
169922	GENERAL AMERICAN TRANS. CORP.(GATX)	GENERAL AMERICAN TRANS. CORP.(GAT	1/31/2014	1/31/2014	1/30/2014
169945	City of Linden	City of Linden	2/12/2014	2/12/2014	2/11/2014
169730	Brushy Creek MUD	Brushy Creek MUD	2/14/2014	2/14/2014	2/13/2014
170096	City of Waco	City of Waco	2/28/2014	2/28/2014	2/27/2014
170009	Brazos River Authority - Waco	Brushy Creek Regional WWTP	2/28/2014	2/28/2014	2/27/2014
169589	CITY OF ARLINGTON	City of Arlington - Fearther Beach	3/3/2014	2/28/2014	2/27/2014
170146	Love's Country Stores, Inc.	Love's Country Stores, Inc.	3/7/2014	3/4/2014	3/3/2014
167112	City of Laredo	City of Laredo	9/7/2012	9/7/2012	9/5/2012
167675	Pepper-Lawson Construction, L.P.	Pepper-Lawson Construction, L.P.	10/9/2012	9/7/2012	9/5/2012
167748	Villas on 6th, LP	Villas on 6th, LP	10/24/2012	9/21/2012	9/19/2012
167781	City of McGregor - Field Service North Lift Station	Barsh Company-McGregor	12/31/2012	12/21/2012	12/19/2012
168097	FLOWSERVE	Flowserve - TRA PS13 - WAS414	1/25/2013	1/24/2013	1/22/2013
168299	City of Bastrop	City of Bastrop	2/28/2013	2/28/2013	2/26/2013
168115	City of Waco	City of Waco	3/31/2013	3/31/2013	3/29/2013
168561	WEG ELECTRIC MOTORS & DRIVES	Integrated Power Services	4/12/2013	4/15/2013	4/13/2013
168652	Boyd I.S.D.	Boyd I.S.D.	4/23/2013	4/19/2013	4/17/2013
168527	Savoy ISD	Savoy ISD	5/3/2013	5/3/2013	5/1/2013
168659	Barsh Company	Barsh Company	4/22/2013	5/8/2013	5/6/2013
168360	CITY OF ALLEN	CITY OF ALLEN	5/10/2013	5/10/2013	5/8/2013
168246	Eagle Contracting, L.P.	Trinity River Authority - CRWS PS 13 Sea	5/24/2013	5/24/2013	5/22/2013
167037	Crescent Constructors, Inc.	North Texas MUD - South Delivery Point	5/24/2013	5/24/2013	5/22/2013
168991	City of Log Cabin	City of Log Cabin	6/26/2013	6/28/2013	6/26/2013
168913	City of Moody	City of Moody	6/30/2013	6/30/2013	6/28/2013
167534	Archer Western	WCTMWD- Hubbard Creek Lake PS- Pun	5/15/2013	7/3/2013	7/1/2013

169126	City of Midway	City of Midway	7/26/2013	7/26/2013	7/24/2013
169029	Upper Trinity Regional Water Dist.	Upper Trinity Regional Water	7/31/2013	7/31/2013	7/29/2013
169198	City of Valley Mills	City of Valley Mills	8/14/2013	8/14/2013	8/12/2013
169110	DHS Automation, Inc.	DHS Automation, Inc.	8/16/2013	8/16/2013	8/14/2013
169111	DHS Automation, Inc.	DHS Automation, Inc.	8/16/2013	8/16/2013	8/14/2013
168501	City of Austin - Austin Energy Domain Repair #22 & #29	Austin Energy	8/31/2013	8/31/2013	8/29/2013
169356	Clinton Plumbing Group	Sam's Club - Grapevine	9/20/2013	9/20/2013	9/18/2013
169523	Southeastern Freight	Southeastern Freight	10/18/2013	10/18/2013	10/16/2013
168988	City of Odessa	City of Odessa WTP	10/30/2013	10/30/2013	10/28/2013
169638	Austonian	Austonian	11/29/2013	11/29/2013	11/27/2013
169928	City of McGregor	City of McGregor	1/30/2014	1/17/2014	1/15/2014
170091	Denton County FWSD 8C	Denton County FWSD 8C - Frisco Ranch	2/25/2014	2/21/2014	2/19/2014
169623	Blue Water Oaks Service Co.	Blue Water Oaks Service Co.	2/28/2014	2/28/2014	2/26/2014
170122	City of Terrell	City of Terrell	3/4/2014	2/28/2014	2/26/2014
167663	Mike Staas Services, Inc.	Mike Staas Services, Inc.	9/7/2012	9/7/2012	9/4/2012
167784	Keystone Construction	COA - ALLEN ROAD P.S.	1/31/2013	9/30/2012	9/27/2012
167880	Texas Westmoreland Coal Co.	Texas Westmoreland Coal Co.	1/31/2013	1/31/2013	1/28/2013
167937	City of Rockdale	City of Rockdale	2/25/2013	2/28/2013	2/25/2013
168112	Connally I.S.D.	Connally I.S.D. - Booster Pump Station	2/28/2013	2/28/2013	2/25/2013
168647	Spanish View Apartments	Spanish View Apartments	4/19/2013	4/19/2013	4/16/2013
168558	FLOWSERVE - Brownsville PUB	Flowserve	5/14/2013	4/26/2013	4/23/2013
168804	City of Somerville	City of Somerville	5/17/2013	5/17/2013	5/14/2013
168633	City of Caldwell	City of Caldwell	5/17/2013	5/17/2013	5/14/2013
168830	City of Fort Worth - Parks & Community Services	City of Fort Worth - Parks & Community	5/31/2013	5/24/2013	5/21/2013
168872	City of Mexia	City of Mexia	6/7/2013	6/7/2013	6/4/2013
168920	Archer Western Contractors, Inc.	Dallas - Southside WWTP Dewatering Fa	6/13/2013	6/13/2013	6/10/2013
167961	Conatser Construction, Inc.	Denton - Ryan Companies Addition	4/1/2013	6/14/2013	6/11/2013
168945	City of Midway	City of Midway	6/18/2013	6/21/2013	6/18/2013
168869	U.S. Fish & Wildlife Service	U.S. Fish & Wildlife Service	6/28/2013	6/29/2013	6/26/2013
168890	McNeil Ranch	McNeil Ranch	6/29/2013	6/29/2013	6/26/2013
168957	City of Round Rock	City of Round Rock	7/1/2013	7/1/2013	6/28/2013
168908	WEIR SPECIALTY PUMPS	WEIR SPECIALTY PUMPS-SAWS Dos Rios	7/5/2013	7/5/2013	7/2/2013
168086	City of Fort Worth	City of Fort Worth	7/26/2013	7/26/2013	7/23/2013
169179	Physicians Center	Physicians Center	8/9/2013	8/9/2013	8/6/2013
169189	Greenwood Funeral Home	Greenwood Funeral Home	8/9/2013	8/9/2013	8/6/2013
169142	City of Covington	City of Covington	8/9/2013	8/9/2013	8/6/2013
169199	Armando Rodriguez	Armando Rodriguez	8/12/2013	8/12/2013	8/9/2013
168990	City of Olney	City of Olney	8/30/2013	8/30/2013	8/27/2013
169295	City of Fort Worth - Village Creek WTP	City of Fort Worth - Village Creek WTP	8/30/2013	8/30/2013	8/27/2013
168772	City of Hutto	City of Hutto - Glenwood LS	8/31/2013	8/31/2013	8/28/2013
168052	FLOWSERVE - Lonoke	PC Construction	9/30/2013	9/1/2013	8/29/2013

169009	City of Frisco	City of Frisco	9/6/2013	9/6/2013	9/3/2013
169331	City of Lorena	City of Lorena - Well #3 - Booster Pump	9/13/2013	9/13/2013	9/10/2013
169376	City of Robinson	City of Robinson	9/30/2013	9/30/2013	9/27/2013
169447	Keystone Construction	Keystone Construction	10/4/2013	10/4/2013	10/1/2013
169385	Ferguson Enterprises	Ferguson Enterprises	10/11/2013	10/11/2013	10/8/2013
169486	Blue Water Oaks Service Co.	Blue Water Oaks Service Co.	10/18/2013	10/11/2013	10/8/2013
169554	Eagle Contracting, L.P.	Eagle Contracting, LP	10/25/2013	10/25/2013	10/22/2013
169591	Wells Cargo Texas Division	Wells Cargo Texas Division	10/31/2013	10/31/2013	10/28/2013
169438	City Of Corpus Christi	City Of Corpus Christi - OSO WWTP - 201	11/1/2013	11/1/2013	10/29/2013
169143	Upper Trinity Regional Water Dist.	Upper Trinity Regional Water	11/4/2013	11/4/2013	11/1/2013
169403	Medtronic, Inc.	Medtronic, Inc.	11/15/2013	11/15/2013	11/12/2013
169717	AVALON W.S.C.	AVALON W.S.C.	12/6/2013	12/6/2013	12/3/2013
169583	Toyota of Boerne	Toyota of Boerne	12/13/2013	12/13/2013	12/10/2013
169875	AAA Auger	AAA AUGER-Grace House	1/3/2014	1/3/2014	12/31/2013
169898	Ferguson Enterprises	Ferguson Enterprises	1/10/2014	1/10/2014	1/7/2014
169899	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	1/10/2014	1/10/2014	1/7/2014
169824	Central Texas College	Central Texas College	1/17/2014	1/17/2014	1/14/2014
169756	GUADALUPE BLANCO RIVER AUTHORITY	GBRA - RRWDS #2	1/31/2014	1/31/2014	1/28/2014
169839	Shelton Plumbing, Inc.	Shelton Plumbing, Inc.	2/14/2014	2/14/2014	2/11/2014
170041	Tarrant Regional Water District	Tarrant Regional Water District	2/21/2014	2/21/2014	2/18/2014
169931	Wilbur-Ellis Co. - Hearne	Wilbur-Ellis Co. - Hearne	2/28/2014	2/28/2014	2/25/2014
168310	Meadows of Wesley Village	Meadows of Wesley Village	2/8/2013	2/5/2013	2/1/2013
168244	City of Grand Prairie	City of Grand Prairie	2/8/2013	2/8/2013	2/4/2013
168387	Pepper Lawson Renda, LLC	Pepper Lawson Renda, LLC-City of Clebu	2/22/2013	2/22/2013	2/18/2013
168346	Conatser Construction, Inc.	Southwest Christian School	3/4/2013	3/5/2013	3/1/2013
168437	Ed Baer	Ed Baer	3/15/2013	3/15/2013	3/11/2013
168469	Upper Trinity Regional Water Dist.	Upper Trinity Regional Water	3/22/2013	3/22/2013	3/18/2013
168522	City of Fort Worth - Parks & Community Services	City of Fort Worth - Parks & Community	3/28/2013	3/26/2013	3/22/2013
168353	City of Fairfield	City of Fairfield	3/31/2013	3/31/2013	3/27/2013
168515	City of Bastrop - Service	City of Bastrop	3/31/2013	3/31/2013	3/27/2013
168297	CITY OF BELTON	City of Belton	3/31/2013	3/31/2013	3/27/2013
168603	Rush Real Estate Holdings, Inc.	Rush Real Estate Holdings, Inc.	4/12/2013	4/12/2013	4/8/2013
167640	Bar-B Plumbing - Fort Hood Replacment Turbine	Fort Hood - Replace Pump & Valves at W	4/13/2013	4/13/2013	4/9/2013
168662	BROWNSVILLE PUBLIC UTILITIES BOARD	BROWNSVILLE PUBLIC UTILITIES BOARD	4/26/2013	4/26/2013	4/22/2013
168679	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	4/26/2013	4/26/2013	4/22/2013
168799	Medtronic, Inc.	Medtronic, Inc.	5/24/2013	5/24/2013	5/20/2013
168824	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	5/24/2013	5/24/2013	5/20/2013
168531	City of Sweetwater	City of Sweetwater - Booster Pump Stati	5/28/2013	5/28/2013	5/24/2013
168664	Garney Companies, Inc.	Midlothian - WTP #2 - Phase II	6/14/2013	6/14/2013	6/10/2013
168942	Denton County FWSD 8C	D & J Inspections - Frisco Ranch	6/21/2013	6/17/2013	6/13/2013
168956	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	6/21/2013	6/21/2013	6/17/2013

168888	McCarthy Building Companies, Inc.	McCarthy Building Companies	6/28/2013	6/28/2013	6/24/2013
168680	City of Gatesville	City of Gatesville	6/30/2013	6/30/2013	6/26/2013
168660	City of McGregor	City of McGregor	6/30/2013	6/30/2013	6/26/2013
169249	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	8/23/2013	8/23/2013	8/19/2013
169165	Garfield WSC	Garfield WSC	8/30/2013	8/30/2013	8/26/2013
169140	City of Fort Worth - Parks & Community Services	City of Fort Worth - Parks & Community	8/30/2013	8/30/2013	8/26/2013
169344	Whitney I.S.D.	Whitney I.S.D.	9/13/2013	9/13/2013	9/9/2013
169317	International Marina	International Marina	9/20/2013	9/20/2013	9/16/2013
169377	Tony Garczynski Dev. Inc.	Tony Garczynski Dev. Inc.-Fisher House	9/20/2013	9/20/2013	9/16/2013
169380	Greenwood Funeral Home	Greenwood Funeral Home	9/20/2013	9/20/2013	9/16/2013
169254	Lee Contractors, Inc.	Beck Commons & Retail Center	10/4/2013	10/4/2013	9/30/2013
169478	Southeastern Freight	Southeastern Freight	10/18/2013	10/11/2013	10/7/2013
169508	Terry Backiel	Terry Backiel	10/18/2013	10/18/2013	10/14/2013
169427	City of Frisco	City of Frisco	11/8/2013	11/8/2013	11/4/2013
169688	Landa RV Park	Landa RV Park	11/22/2013	11/22/2013	11/18/2013
169694	Boss Engineering	Boss Engineering	11/25/2013	11/25/2013	11/21/2013
168854	Southlake Public Works Department	Southlake Public Works Department-TW	12/6/2013	12/6/2013	12/2/2013
169614	City of Evant	City of Evant	1/3/2014	1/3/2014	12/30/2013
169940	Embree Construction	R.O.C.K. Ride on Center for Kids	1/21/2014	1/21/2014	1/17/2014
169956	Qual-I-Tech Environmental	Qual-I-Tech Environmental	1/31/2014	1/31/2014	1/27/2014
169846	Medtronic, Inc.	Medtronic, Inc.	1/31/2014	1/31/2014	1/27/2014
169793	City of Plano	Hoblitzelle Park	2/4/2014	2/4/2014	1/31/2014
169981	Embree Construction	Embree Campus - Building 2 LS	2/7/2014	2/7/2014	2/3/2014
170005	Joe & Sharon Warren	Joe & Sharon Warren	2/7/2014	2/7/2014	2/3/2014
169575	City of Fort Worth - Parks & Community Services	City of Fort Worth - Parks & Community	2/11/2014	2/14/2014	2/10/2014
170032	Unifirst	Unifirst	2/14/2014	2/14/2014	2/10/2014
169861	DHS Automation, Inc.	DHS Automation, Inc.	2/14/2014	2/14/2014	2/10/2014
169771	CITY OF CAMERON	CITY OF CAMERON-Milam Ave WTP	2/26/2014	2/26/2014	2/22/2014
169772	City of Clifton	City of Clifton	2/28/2014	2/28/2014	2/24/2014
167454	McLennan County WCID #2	McLennan County WCID #2	9/30/2012	9/30/2012	9/25/2012
167622	Holt Equipment	Holt Equipment	9/30/2012	9/30/2012	9/25/2012
167904	NABS/ LATTIMORE MATERIALS CO.	Lattimore Materials Co.	1/16/2013	1/16/2013	1/11/2013
168596	Tom Day Company-Denton Towne Crossing	Tom Day Company-Denton Towne Cross	4/12/2013	4/10/2013	4/5/2013
168682	City of Waco: Riverside WTP Breaker Warranty	City of Waco	4/30/2013	4/30/2013	4/25/2013
168262	City of Lago Vista - Raw Water Pump #1	City of Lago Vista	4/30/2013	4/30/2013	4/25/2013
168951	Elm Creek W.S.C.	Elm Creek W.S.C.-Liberty Hill Well	6/29/2013	6/29/2013	6/24/2013
168866	City of Seguin	City of Seguin	6/30/2013	6/30/2013	6/25/2013
169076	Bluebonnet W.S.C.	Bluebonnet W.S.C.	7/31/2013	7/31/2013	7/26/2013
169066	Tarrant Regional Water District - Cedar Creek RWP #1 Lev	Tarrant Regional Water District	7/31/2013	7/31/2013	7/26/2013
169148	City of Franklin	City of Franklin	7/31/2013	7/31/2013	7/26/2013
169204	City of Tehuacana	City of Tehuacana	8/26/2013	8/26/2013	8/21/2013

168836	Texas State University	University Distr. Center - Tx. State Unive	9/14/2013	9/14/2013	9/9/2013
169651	Chisholm Trail Special Utility District	Chisholm Trail SUD - Domel Well #1	11/30/2013	11/30/2013	11/25/2013
169687	Miles I.S.D.	Miles I.S.D.	11/30/2013	11/30/2013	11/25/2013
169572	Savoy ISD	Savoy ISD	2/4/2014	2/4/2014	1/30/2014
167573	Commercial Consolidated, Inc.	Commercial Consolidated, Inc.	8/31/2012	8/20/2012	8/14/2012
167568	Lake Hills Church	Lake Hills Church	9/11/2012	8/20/2012	8/14/2012
167778	Shemin Nurseries, Inc.	Shemin Nurseries, Inc.	10/8/2012	9/30/2012	9/24/2012
167688	AAA STORAGE WAREHOUSE	AAA STORAGE WAREHOUSE	10/10/2012	10/7/2012	10/1/2012
168233	Worth Hydrochem	Worth Hydrochem	1/31/2013	1/31/2013	1/25/2013
168379	Toyota of Boerne	Toyota of Boerne	2/21/2013	2/21/2013	2/15/2013
163859	Industrial Tx Corporation	City of Pearland	2/28/2013	2/28/2013	2/22/2013
166317	Allco, Inc.	City of Nederland WTP	2/28/2013	2/28/2013	2/22/2013
168456	FLOWSERVE	Flowserve	3/13/2013	3/13/2013	3/7/2013
168580	City of Clifton	City of Clifton	4/12/2013	4/12/2013	4/6/2013
168611	Central Texas Security & Fire Equipment	Central Texas Security & Fire Equipment	4/29/2013	4/29/2013	4/23/2013
168152	City of Crockett	City of Crockett	4/30/2013	4/30/2013	4/24/2013
168858	City of Gatesville	City of Gatesville	5/31/2013	5/31/2013	5/25/2013
168967	Waco Family Entertainment	Waco Family Entertainment	6/30/2013	6/30/2013	6/24/2013
169059	Kempner W.S.C.	Kempner W.S.C. - Hugley PS	7/31/2013	7/31/2013	7/25/2013
168579	Terry Black Construction-2011 TCDP Sewer Improvements	Terry Black Construction-City of Zavalla	9/30/2013	9/30/2013	9/24/2013
169252	City of Fort Worth - Village Creek WTP	City of Fort Worth - Village Creek WTP	10/16/2013	10/16/2013	10/10/2013
169528	Philip Fox	Philip Fox	10/25/2013	10/25/2013	10/19/2013
169383	Brown County W.I.D. #1	Brown County W.I.D. #1	1/10/2014	1/10/2014	1/4/2014
169873	City of Howe	City of Howe	1/21/2014	1/14/2014	1/8/2014
170069	Texas Parks & Wildlife	Texas Parks & Wildlife	2/28/2014	2/28/2014	2/22/2014
169936	City of Henderson	City of Henderson	2/28/2014	2/28/2014	2/22/2014
167691	Villas on 6th, LP	Villas on 6th, LP	9/28/2012	9/14/2012	9/7/2012
167976	Dan Loisel	Dan Loisel	11/14/2012	11/14/2012	11/7/2012
167163	City of Odessa	City of Odessa - Golden PS - HS #3	12/15/2012	12/15/2012	12/8/2012
167634	City of Sanger	City of Sanger	1/31/2013	1/31/2013	1/24/2013
168285	Texas Outdoor Power	Texas Outdoor Power	2/28/2013	2/15/2013	2/8/2013
168175	Connally I.S.D.	Connally I.S.D.	2/28/2013	2/28/2013	2/21/2013
168453	John Reider Properties	John Reider Properties	3/29/2013	3/13/2013	3/6/2013
168428	Blue Water Oaks Service Co.	Blue Water Oaks Service Co.	4/5/2013	4/5/2013	3/29/2013
168431	City of Waco - Repair S4P Riverside LS #1	City of Waco	4/19/2013	4/19/2013	4/12/2013
168671	Granbury I.S.D.	Granbury I.S.D.	4/26/2013	4/26/2013	4/19/2013
168557	TBM Heat Treating, Inc	TBM Heat Treating, Inc	5/15/2013	5/15/2013	5/8/2013
168707	Brazos River Authority	Brushy Creek Regional WWTP	5/31/2013	5/31/2013	5/24/2013
168797	Mike Castleman	Mike Castleman	5/31/2013	5/31/2013	5/24/2013
168875	Love's Country Stores, Inc.	Love's Country Stores, Inc.	6/7/2013	6/7/2013	5/31/2013
168911	Lovely Food Mart	Lovely Food Mart	6/14/2013	6/14/2013	6/7/2013

168874	City of Gatesville	City of Gatesville	6/14/2013	6/14/2013	6/7/2013
168604	City of Arlington	City of Arlington	6/14/2013	6/14/2013	6/7/2013
168841	City of Richland Hills	City of Richland Hills	6/14/2013	6/14/2013	6/7/2013
168792	HOLT EQUIPMENT	Holt Equipment	6/21/2013	6/21/2013	6/14/2013
168994	Karl Swoboda	Karl Swoboda	6/28/2013	6/28/2013	6/21/2013
168541	City of Brownwood	City of Brownwood	7/12/2013	6/28/2013	6/21/2013
169014	Cibolo Creek Municipal Authority	Towne Creek Lift Station	7/5/2013	7/5/2013	6/28/2013
169013	Beachview Acres Water Association	Beachview Acres Water Association	7/10/2013	7/10/2013	7/3/2013
169069	WASTE MANAGEMENT - Ferris	WASTE MANAGEMENT - Ferris	7/19/2013	7/19/2013	7/12/2013
169003	Archer Western Contractors, Inc.	Dallas - Southside WWTP	7/19/2013	7/19/2013	7/12/2013
169115	City of Castroville	City of Castroville	7/26/2013	7/26/2013	7/19/2013
169131	City of Madisonville	City of Madisonville	7/31/2013	7/31/2013	7/24/2013
169104	City of Waco	City of Waco	8/9/2013	8/9/2013	8/2/2013
169078	Lochridge-Priest, Inc.	Lochridge-Priest, Inc.	8/15/2013	8/15/2013	8/8/2013
169239	Village Park Condo Association	Village Park Condo Association	8/30/2013	8/30/2013	8/23/2013
169315	Campos Utilities, Inc. Lvd	Executive Suites Motel	9/6/2013	9/6/2013	8/30/2013
169019	CITY OF ARLINGTON	City of Arlington - Pierce-Burch	9/13/2013	9/13/2013	9/6/2013
169393	Cibolo Creek Municipal Authority	Town Creek Lift Station	9/27/2013	9/27/2013	9/20/2013
169397	Cordi-Marian Sisters	Cordi-Marian Sisters	9/27/2013	9/27/2013	9/20/2013
169173	City of Eustace	City of Eustace	9/30/2013	9/30/2013	9/23/2013
169421	Conatser Construction, Inc.	Peerless Manufacturing	9/27/2013	10/4/2013	9/27/2013
169461	St Antony Church	St Antony Church	10/11/2013	10/11/2013	10/4/2013
169472	Clinton Plumbing Group	Wal Mart	10/18/2013	10/11/2013	10/4/2013
169482	Bastrop State Park	Bastrop State Park-Copperas Creek Cam	10/25/2013	10/25/2013	10/18/2013
169540	High Point Water Supply Corporation	High Point Water Supply Corporation	10/30/2013	10/30/2013	10/23/2013
169642	Meadow Park Village Apartments	Meadow Park Village Apartments	11/15/2013	11/15/2013	11/8/2013
169460	City of Henderson	City of Henderson	11/30/2013	11/30/2013	11/23/2013
169435	Truck & Travel	Truck & Travel	12/20/2013	12/20/2013	12/13/2013
169832	Ron's Marina One, Ltd.	Ron's Marina One, Ltd.	1/10/2014	1/10/2014	1/3/2014
169742	City of Waco	City of Waco - Old Lorena Well	1/20/2014	1/20/2014	1/13/2014
169914	C.A.R.E. Inc.	C.A.R.E. Inc.	1/31/2014	1/31/2014	1/24/2014
169792	CITY OF WOODWAY	CITY OF WOODWAY	2/7/2014	2/7/2014	1/31/2014
170068	Embree Construction	Embree Construction	2/21/2014	2/21/2014	2/14/2014
167547	CITY OF AMARILLO	City of Amarillo	8/31/2012	8/31/2012	8/23/2012
167597	City of Taylor	City of Taylor - Park P.S.	9/14/2012	8/31/2012	8/23/2012
168130	D5 Enterprises - Toyota Boerne	D5 Enterprises - Toyota Boerne	1/4/2013	1/4/2013	12/27/2012
168138	City of Fort Worth	City of Fort Worth	1/25/2013	1/25/2013	1/17/2013
168483	Frost Bank Office Building	Frost Bank Office Building	3/29/2013	3/28/2013	3/20/2013
168309	Llano County MUD 1	Llano County MUD 1	3/30/2013	3/30/2013	3/22/2013
168140	City of Troy	City of Troy	4/30/2013	4/30/2013	4/22/2013
167936	Upper Trinity Regional Water Dist. - HSP #7 Repair	Upper Trinity Regional Water	5/31/2013	5/31/2013	5/23/2013

Table 9– Subcontractors and Suppliers

Organization doing business as: Smith Pump Company, Inc.

Subcontractors and Suppliers

Provide a list of subcontractors or suppliers that will provide materials or services for the Contract. Limit list to those that will provide more than 10% of the cost of materials and services (based on percent of Contract Price), unless subcontractor or supplier contributes to meeting Fair Business Opportunities (FBO) Goals. List all FBO subcontractor and suppliers.

Name	Materials / Service to be provided	Est. percent of contract	HUB/MWBE firm
Flowserve Corporation	Vertical Turbine Pumps	30	No
U.S. Motors / NIDEC	Vertical Solid Shaft Motors	15	No
Dealers Electric	Variable Frequency Drives	55	No

Affidavits

The following affidavit shall be executed and provided with this Statement of Qualifications. By submitting this Statement of Qualifications and related information; Offeror acknowledge they have read these documents and these documents are true and correct and contain no material misrepresentations; and that they are authorized to make this affidavit on behalf of the Offeror's organization. The individual signing the affidavit shall attach evidence of their authority to bind the organization to an agreement.

Seller: Smith Pump Company, Inc
(typed or printed)

By: 
(Individual's signature)

Name: Jean Radtke
(typed or printed)

Title: Vice President
(typed or printed)

Attest: 
(Individual's signature)

Designated representative:

Name: Jean Radtke

Title: Vice President

Address: 1900 West Howard Lane
Austin, Texas 78728

Phone: 512-310-1480

Facsimile: 512-310-1417

E-mail: jeanr@smithpump.com

END OF SECTION

PUMP AND MOTOR, VTP-102 and VTP-103

General Scope of Supply

Non-material requirements:

Submittals:

General Submittal Data (enclosed)
 Lateral and torsional critical speed analyses (enclosed)
 Forces and moment analyses on discharge heads (enclosed)
 Certifications of Compliance (later)

Test Procedures

Hydrostatic (later)
 Performance (later)
 Short commercial and complete tests (later)

Shop Test Reports & Inspections

Hydrostatic test, bowl (later)
 Pump performance test w/ factory motor (later)
 Motor inspections and general tests (later)
 Motor efficiency test (enclosed)

Manufacturer's I, O, & M Manual (Later)

Equipment Delivery and Storage

Ship equipment to jobsite.
 Installing contractor to unload.
 Storage will be by Contractor
 Store motors inside with space heaters energized
 Store pumps with discharge flange and basket covered

Installation

Installation will be by Installing Contractor.
 Smith Pump must be present during installation.
 Smith Pump must be present during start-up

Item of field service as further described below:

- Millwright to check barrel top flange level
- Supervision of installation.
- Startup supervision after installation by contractor
- Field data collection after power and water are available
 - Voltage (check prior to start and during operation)
 - via Owner's meter or by Smith Pump
 - Current (via Smith Pump's meter)
 - Flow
 - Pressure (via Smith Pump's gauge)
 - Vibration (via Smith Pump's gauge) at discharge elbow.
- Field startup report (Later)
- Owner training in I, O, & M.(later)

Specific Scope of Supply

Q=2200 gpm
 H=305' TDH
 P=250 hp
 N=1800 rpm
 Wire to water efficiency=78.6%
 Base to bell=12.8'

Each pump with:

1-Flowserve 15EMM 3-stage bowl assemblies, Ni-Al-Bz impellers, hardened Ni-Al-Bz case and impeller wear rings, SS collets, 10" flanged column, 416SS lineshafting, bronze-backed rubber lineshaft bearings, 10" fabricated steel discharge head with Rains-Flo packing, sleeved LS at stuffingbox, all SS fasteners, 316 SS suction screen with hydrocone, 3-piece coupling, non-witness hydrostatic test, nonwitness performance bowl test with calculated losses for 100%, 90%, 80% and 70% speeds

1-Blast and coat per 09 96 00.01.

1-USEM 250hp/1800rpm/460v/3ph vertical solid-shaft motor, WP1 enclosure, rated inverter duty, short commercial and complete tests, motor manufacturer service representative, 120v space heaters, vibration switches and thermal switch in accessory box, copper bar rotor

Additional items:

- Pre and post submittal meetings with vendor Project Managers
- Item lateral and torsional analysis, structure dynamic analysis, forces and moments analysis
- Item Certified Test Results for pump and motor factory performance tests, bowl hydrostatic test, stress relieve certificates, barrel mounting level measurements, pump and motor field tests
- Item Equipment Installation Report
- Item maximum backspin speed certification
- Item spare parts
- Item lubricants
- Item O&M manuals
- Item field services to included starting & adjusting, preliminary operational test, system operational test and troubleshooting, as required
- Item training
- Item 2 year warranty

Notes:

1. Items NOT included: installation, piping, valves, conduit, wiring, disconnects and off-loading at jobsite.
2. Flowserve exceptions:
 - a. Flowserve will accept test efficiency deductions of up to \$6000 per for a maximum of \$12,000.00.
 - b. Flowserve will match mark the complete pump prior to shipping. Pump will ship into Smith Pump - Waco shop for blasting and coating and reassembly prior to shipment into the field.
3. USEM exceptions:
 - a. USEM is guaranteeing motor efficiency at sine wave power and at full load.
 - b. 2.02.A.8. USEM will have torched and brazed end rings. Rotors shall be stacked and then welded.
 - c. 2.02.E.1. USEM is quoting a NEMA Type II box that cannot be rotated 90-degrees due to its size.
 - d. 2.02.H.4. USEM is supplying the Metrix 162 VTS vibration transmitter with (2) Per thrust bearing. USEM no longer offers MC 160A vibration transducers. The PMC 440DR to be supplied by others.
4. Schedules:
 - a. Submittal can be made 4 weeks after executed contract.
 - b. Pump delivery is 28-30 weeks after release for production.

**ATTACHMENT A
SUBMITTAL DATA SHEET
VERTICAL PUMPING UNITS**

Equipment Supplier: _____

Submit the following data with Proposal for each size of Pumping Unit.

Pfennig Pump Station

Pump Data

1. Make and Type Design	Flowsolve 15EMM
2. Rated Speed	1775
3. Bowl Size	15"
4. Number of Bowls	3
5. Impeller Diameter and Material	11.64" / NiAlBz
6. Bowl Shaft Diameter and Material	2.19" / 416SS
7. Line Shaft Diameter and Material	1.5" / 416SS
8. Column Diameter and Thickness	10" / .280"
9. Maximum Shaft Thrust Load	
10. Shutoff Head	440
11. Impeller Specific Speed	2380
12. Maximum Backspin Speed	140%
13. Suction Specific Speed	9100
14. Maximum Brake Horsepower	208
15. NPSH Required at Rated Head	20'
16. NPSH Required at Minimum Head	44'
17. Wire-to-Water Efficiency at Rated Point	78.6%

Weights

1. Pump and Motor Stand	2200#
2. Motor	2800#
3. Complete Unit	5000#

Miscellaneous Information

1. Motor Factory Test Location (City, State, Country)	Mena, Arkansas
2. Pump Factory Test Location (City, State, Country)	Hastings, Nebraska

Note: Also attach or enclose with the Proposal additional description of all equipment offered as requested in the equipment specifications, including but not limited to the physical dimensions, characteristic curves and pertinent engineering data to permit easy review and evaluation by the Engineer and Owner.



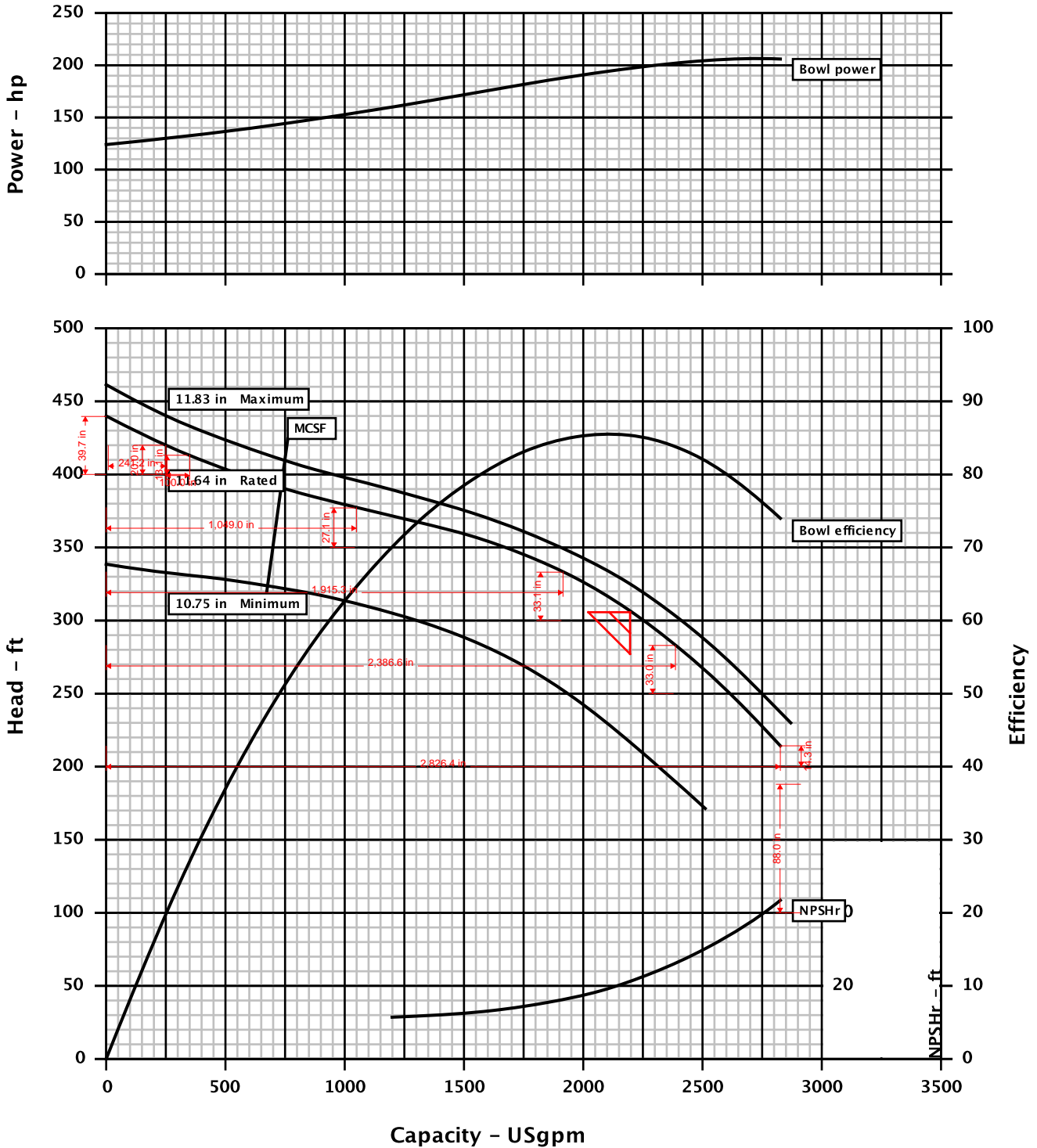
Pump size & type : 15EMM
 Based on curve no. : EC-2377
 Number of stages : 3

Customer : Smith Pump Compan...
 Item number : P'ville-Pfennig-200h...
 Service :
 Flowserve reference : 162525 Version 1
 Date : March 3, 2014

Capacity : 2200.0 USGpm
 Head : 305.00 ft
 Specific gravity : 0.999
 Pump speed : 1775 rpm
 Test tolerance : Hydraulic Institute Level A

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND EFFICIENCY.

Bowl performance shown below is corrected for materials, viscosity and construction.



Bowl head of 306.67 ft corresponds with 305.0 ft head at mounting surface adjusted for elevation and friction losses.

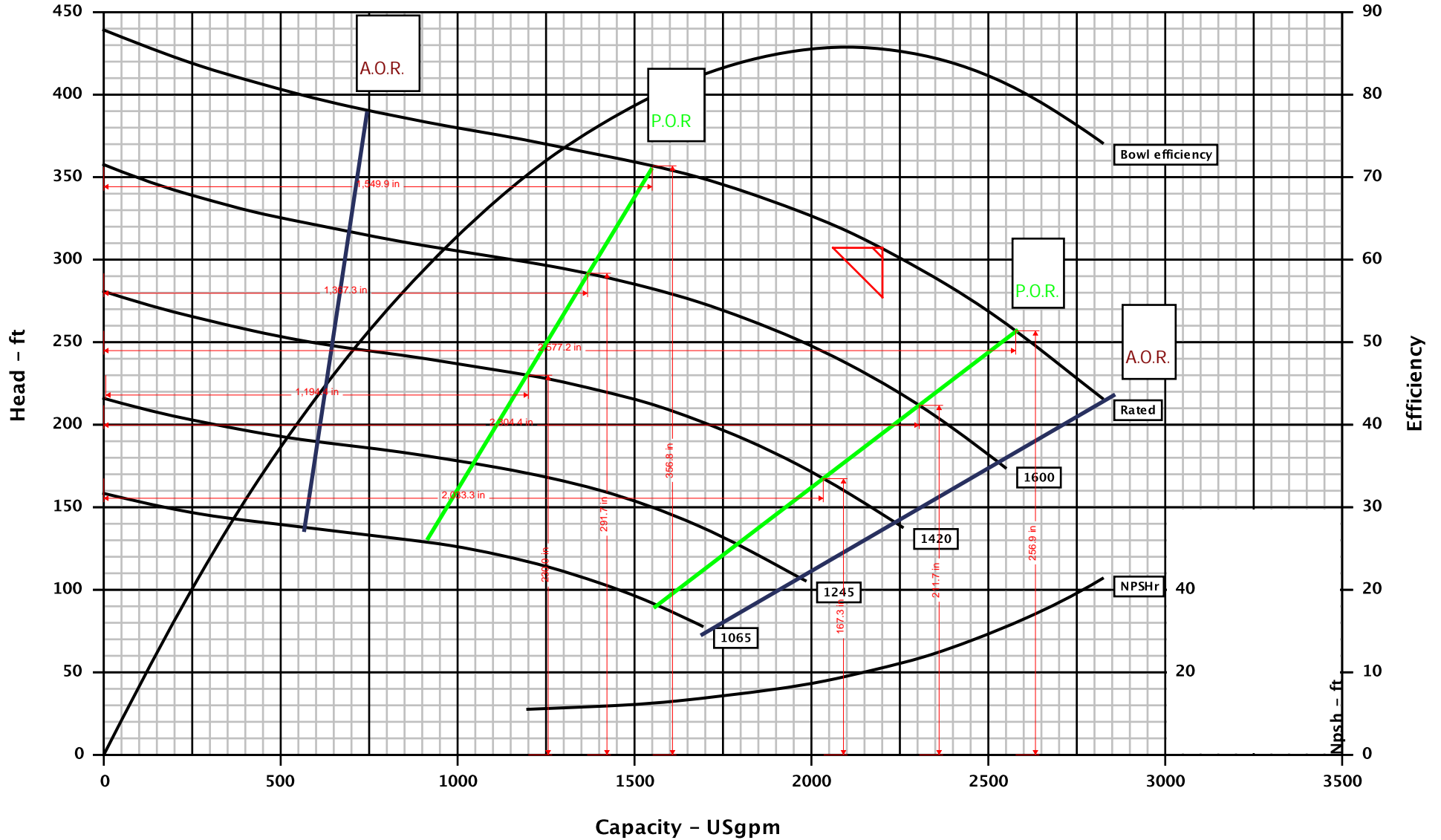
Customer : Smith Pump Compan...
 Item Number : P'ville-Pfennig-250hp
 Service :
 Flowserve Reference : 162525 Version 1
 Date : March 7, 2014



Pump size & type : 15EMM
 Based on curve no. : EC-2377-P006-P006
 Number of stages : 3

Capacity : 2200.0 USgpm
 Head : 305.00 ft
 Specific gravity : 0.999
 Pump speed : 1775 rpm

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND EFFICIENCY.



WIRE TO WATER EFFICIENCY CALCULATION**SOLID SHAFT VERTICAL TURBINE WORKSHEET****Flowserve 15EMM 3-stage****0**

**CALCULATION OF WIRE TO WATER EFFICIENCY
BASED ON PUMP & MOTOR DATA AND
BASED ON PUMP OPERATION WITH PROJECT
SYSTEM CURVE AT RATED HEAD.**

MANUFACTURER	Flowserve
PUMP MODEL	15EMM 3-stage
Flow, gpm	2200
Head, ft	305
Bowl Eff - % PER TEST	83.5%
Bowl HP	202.93
FRICITION CALCULATIONS:	
Column;	0.35
Head;	1.6
Total Friction Loss, ft	1.95
TOTAL LAB HEAD, ft	305.00
Total Friction Head, ft	1.95
TOTAL FIELD HEAD, ft	306.95
Shaft BHP	0.15
Bowl BHP	202.93
TOTAL PUMP HORSEPOWER	203.08
PUMP FIELD EFFICIENCY - %	82.9%
Motor Efficiency w/o Thrust,	95.0%
Downthrust, lbs	3014
Input Motor Horsepower = BHPp/EFFmtr	213.77
Thrust BHP = thrust x rpm x 7.5x10⁻⁸	0.40
Total Input BHP	214.17
MOTOR EFFICIENCY w/ thrust load, %	94.8%
WIRE TO WATER EFFICIENCY, %	78.6%



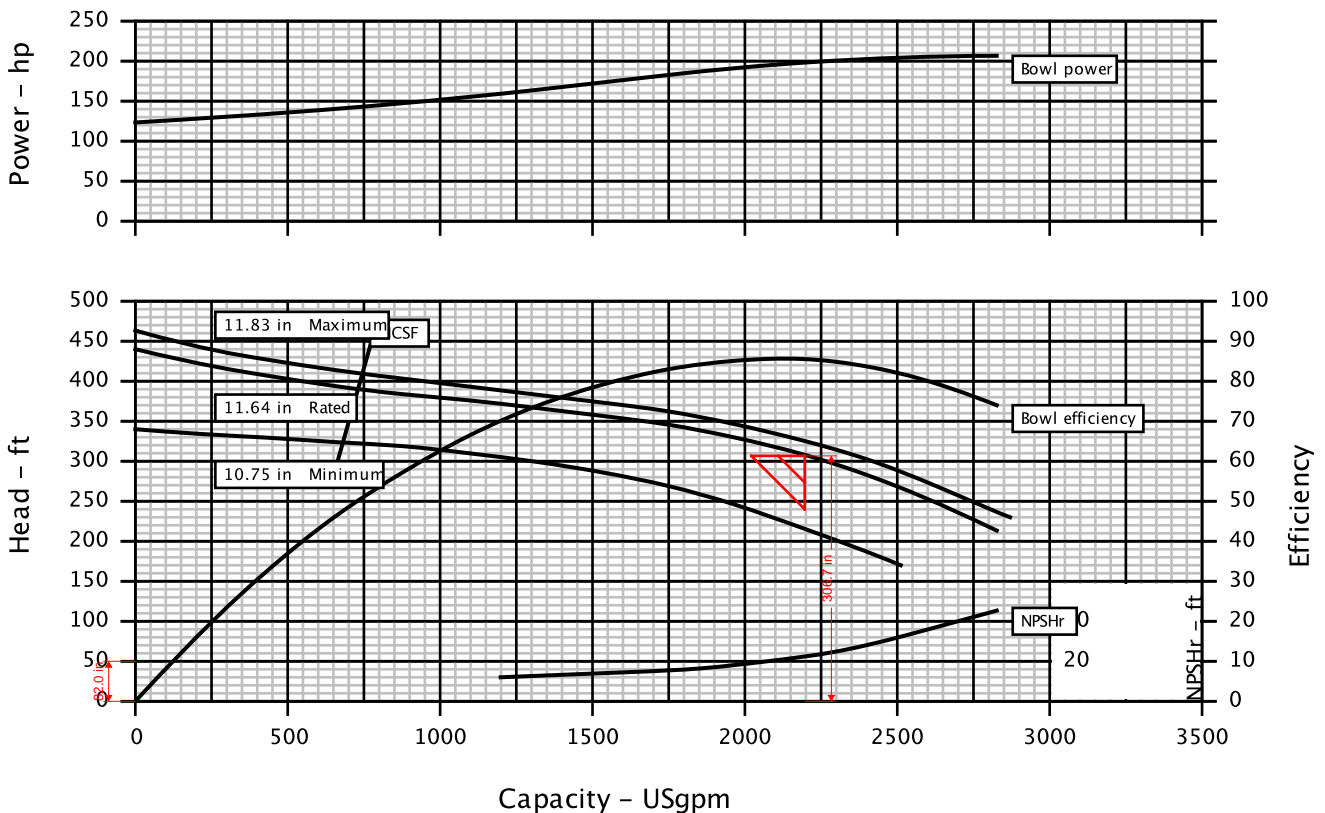
Hydraulic Datasheet

Customer	: Smith Pump Company, Inc.	Pump / Stages	: 15EMM / 3
Customer reference	:	Based on curve no.	: EC-2377
Item number	: P'ville-Pfennig-200hp Alt	Flowserve reference	: 162525 Version 1
Service	:	Date	: March 3, 2014

Operating Conditions		Materials / Specification	
Capacity	: 2200.0 USgpm	Material column code	: B30
Water capacity (CQ=1.00)	: -	Other Requirements Hydraulic selection : No specification Construction : No specification Test tolerance : Hydraulic Institute Level A Driver Sizing : Max Power (SO to EOC) w/o SF	
Normal capacity	: -		
Total Developed Head	: 305.00 ft		
Water head (CH=1.00)	: -		
NPSH available (NPSHa)	: 33.4 ft		
NPSHa less NPSH margin	: -		
Maximum suction pressure	: 0.0 psig		
Rated suction pressure	: 0.0 psig		
Liquid			
Liquid type	: Fresh water		
Liquid description	:		
Temperature / Spec. Gravity	: 60 F / 0.999		
Viscosity / Vapor pressure	: 1.0 cSt / 0.26 psia		

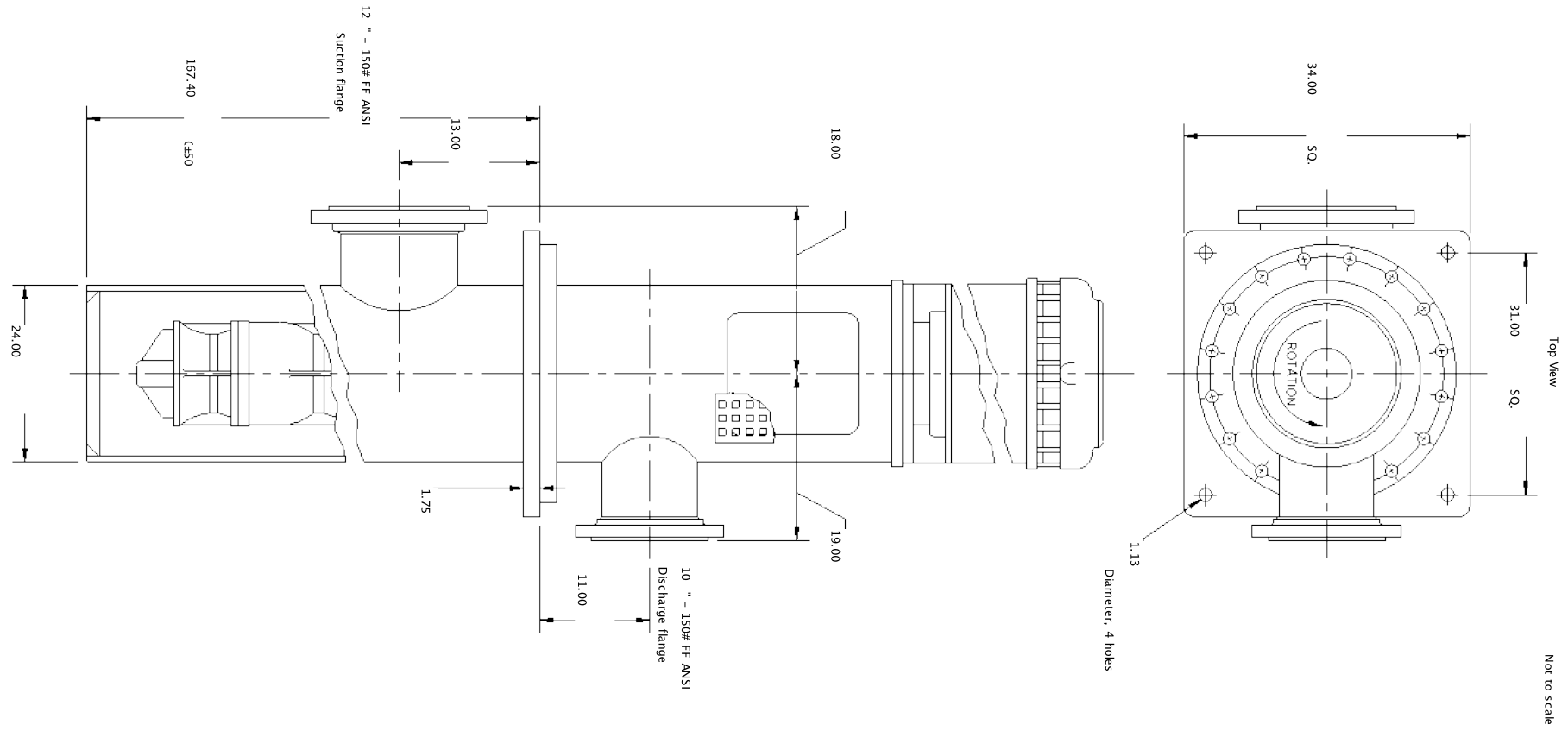
Performance			
Pump speed	: 1775 rpm	Impeller diameter	: Rated / Maximum / Minimum
NPSH required (NPSHr)	: 20.0 ft		: 11.64 in / 11.83 in / 10.75 in
Hydraulic power	: 169 hp	Impeller dia ratio (rated/max)	: 98.4 %
Efficiency (CE=1.00)	: 85.0 %	Maximum head @ rated dia	: 439.46 ft
Power: (Rated / Max)	: 199 hp / 208 hp	Head rise to shut off	: 43.3 %
Driver power	: 250 hp / 186 kW	Total head ratio (rated/max)	: 94.4 %
Bowl Pressure	: 190.1 psig	Flow at BEP	: 2103.9 USgpm
(based on shut off and Rated specific gravity @ Cut dia)		Flow as % of BEP	: 104.6 %
Maximum allowable	: 375.0 psig	Minimum continuous flow	: 736.1 USgpm
Bowl & column hydrotest	: 237.6 psig	Suction specific speed	: 9100 US units
Dischg Head Dischg Region MAWP	: 285.0 psig	Thrust - Rated flow / Rated suction	: 2969.3 lbf
Suction Regions MAWP	: 285.0 psig	Max thrust - Shut off / Rated suction	: 4147.3 lbf
		Min thrust - Runout flow / Max Suction	: 2136.7 lbf
(A negative thrust value indicates an upthrust condition)			

CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS: CAPACITY, HEAD, AND EFFICIENCY.
 Bowl performance shown below is corrected for materials, viscosity and construction.



Bowl head of 306.67 ft corresponds with 305.0 ft head at mounting surface adjusted for elevation and friction losses.

Customer	: Smith Pump Company, Inc.	Pump / Stages	: 15EMM / 3
Customer reference	:	Based on curve no.	: EC-2377
Item number	: P'ville-Pfennig-200hp Alt	Flowserve reference	: 162525 Version 1
Service	:	Date	: March 3, 2014
Construction		Driver Information	
Bowl construction / lined	: Flanged - Std ... / Lined bowls	Manufacturer	: Customer supplied
Impeller type	: Enclosed	Power / SF (Req' / Act')	: 250 hp / 186 kW 1.15
Impeller fastening	: Colleted	Vertical shaft type	: Solid
Column construction	: Flanged	Driver Type	: Electric motor
Column flange spec'n	: Taneytown Specification	Frame size / Base dia	:
Column dia (nominal)	: 10.00 in	Enclosure	: -
Column pipe length	: 8.08 ft	Duty type	:
Column section length	: 108.00 in	Efficiency type	:
Lineshaft brg spacing	: 108.00 in	Hazardous area class	: -
Lineshaft diameter	: 1.50 in	Explosion 'T' rating	: -
Lineshaft coupling type	: Threaded coupling	Volts / Phase / Hz	: 480 V / 0 / -
Lineshaft bearings, qty	: 1	Amps-full load/locked rotor	: - / -
Lineshaft construction	: Open	Motor starting	: Direct on line (DOL)
Lineshaft lubrication	: Pumpage	Insulation	: -
Disch size/rating/face	: 10 inch / : 15... / : FF	Temperature rise	: -
"LF" - Fab'd / Above grade Dschg/ ANSI base		Bearings / Lubrication	: - / -
Thrust Stand Size	: -	Motor mounted by	: Customer
		Motor Thrust rating do...	: - / -
Materials		Seal Information	
Bowl	: Cast Iron A48 CL30	Arrangement	: Packed Box
Impeller	: NiAlBrz B148 C95800	Size	: -
Bowl bearing	: Bronze C84400	Manufacturer / Type	: - / Packing
Bowl shaft	: 416SS A582 Gr 416	Material code (Man'f/API)	: - / -
Bowl wear ring	: Tin Bronze C90300	Gland material	: Cast iron
Impeller wear ring	: Tin Bronze C90300	Auxiliary seal device	: -
Column	: Steel A53 Type E GrB	Seal flush plan	: Plan 13
Lineshaft	: 416 stainless steel	Seal flush construction	: Tubing
Bearing retainer		Paint and Package	
Lineshaft bearing	: Rubber Buna-N	Pump paint	: -
Lineshaft sleeve		Support plate paint	: -
Discharge head	: -	Shipment type	: -
Support plate	: None supplied	Additional information	
Weights (Approx.)		Pit / sump depth	: -
Complete pump	: -	Pump length	: 13.39 ft
Mounting plate	: -	mounting surface to bell/strain...	
Driver(net)	: -	Available well diameter	: -
Testing		Max dia below mtg surface	: 14.75 in
Hydrostatic test	: None		
Performance test	: None		
NPSH test	: None		
Notes			
-			
-			
-			
-			



All dimensions are in inches unless otherwise specified

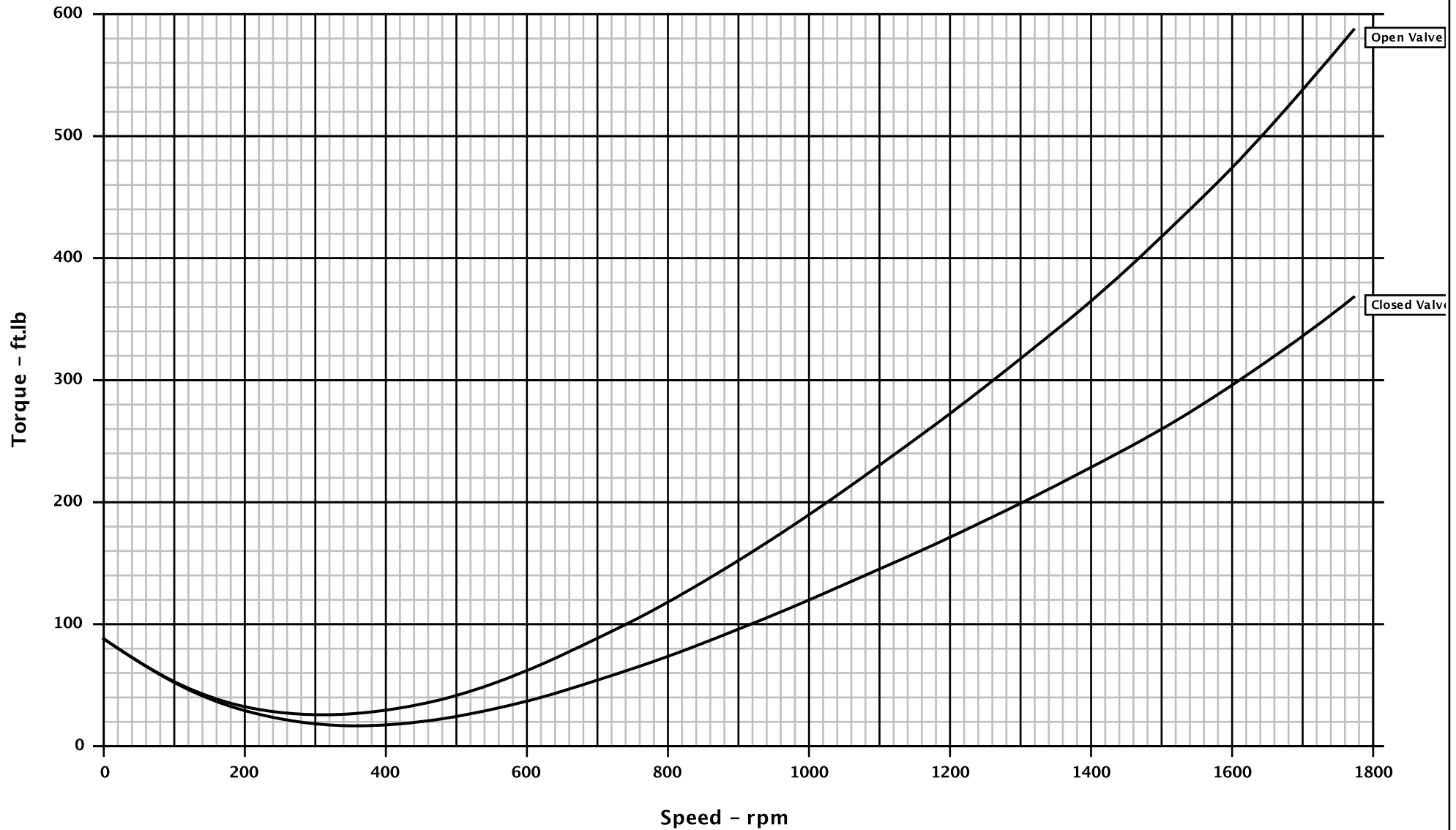
Customer : Smith Pump Company, Inc.	Pump size & type : 15EMM	Drawing number : -
Item number : P'ville-Pfennig-200hp Alt	Pump speed / Stages : 1775 rpm / 3	Date : March 3, 2014
Service :	Flow / Head : 2200.0 USgpm / 305.00 ft	Certified by / Date : -
Customer PO # : -	Driver power / Frame : 250 hp / 186 kW /	Seal type : Packing
Flowserve reference : 162525 Version 1	Volts / Phase / Hz : 480.0 / 0 / -	Seal flush plan : Plan 13

Customer : Smith Pump Compan...
Item Number : P'ville-Pfennig-200h...
Service :
Flowserve Reference : 162525 Version 1
Date : March 3, 2014



Pump size & type : 15EMM
Based on curve no. : EC-2377
Number of stages : 3

Capacity : 2200.0 USgpm
Head : 305.00 ft
Specific gravity : 0.999
Pump speed : 1775 rpm



**ATTACHMENT B
MOTOR SUBMITTAL DATA SHEET - VERTICAL CENTRIFUGAL PUMPS –LINE SHAFT TYPE**

Submit the following data with shop drawing submittal for each size and type of Motor:

Manufacturer	<u>USEM/NIDEC</u>	Motor HP	<u>250</u>
Frame	<u>449VP</u>	Enclosure	<u>WPI</u>
Type	<u>Vertical solid shaft</u>	RPM	<u>1800</u>
Voltage	<u>460</u>	Phase	<u>3</u>
Starting Method	<u>Variable Speed Drive</u>	Hertz	<u>60</u>
Shaft Size	<u>2.125"</u>	Duty	<u>Continuous</u>
Insulation Class	<u>F</u>	No Load Amps	<u>47.5</u>
Full Load Amps	<u>269</u>	Locked Rotor Torque	<u>80% of Full Load</u>
Locked Rotor Amps	<u>1818.8</u>	% Breakdown Torque	<u>175% of Full Load</u>
Locked Rotor Torque		Rotor WK ² (lb-ft ²)	<u>110</u>
Locked Rotor KVA/HP		NEMA Design	<u>B</u>
NEMA Design		Service Factor	<u>1.15 on sine wave power</u>
Service Factor		Inrush Current (% of Full Load)	
Inrush Current (% of Full Load)		Max Safe Stalled Time (seconds)	<u>30</u>
Max Safe Stalled Time (seconds)		Number of Safe Starts Per Day	
Number of Safe Starts Per Day		Number of Consecutive Starts	

*Full Load Temp Rise, in Degree Celsius over 50 Celsius Ambient (at 1.0 S.F.) 70 degree C rise/Resistance @ 1.0 SF

*Service Factor Temp Rise, in Degree Celsius over 50 Celsius Ambient (at 1.15 S.F.)

*Limiting Temperature Rise

Resistance (at 25° C): _____

Bearings: Type/Size _____ Life 100,000 Lubrication: oil/grease

Exhaust Air (CFM): _____ Exhaust Air Temp Rise (°F): _____

	Efficiency	Power Factor	Current
1.15 S.F. Load	<u>94.5</u>	<u>90.7</u>	<u>311</u>
4/4 Load	<u>95.8</u>	<u>91.3</u>	<u>269</u>
3/4 Load	<u>96.1</u>	<u>91.5</u>	<u>200</u>
1/2 Load	<u>95.7</u>	<u>89.2</u>	<u>137</u>
1/4 Load	<u>93.5</u>	<u>77.5</u>	<u>81</u>

Motor Sound Power Level	<u>85 dBA @ 1 meter</u>
Motor Recommended Power Factor	
Space Heater Voltage	<u>115</u>
Wattage	<u>288</u>

END OF SECTION

NIDEC MOTOR CORPORATION

8050 WEST FLORISSANT AVE.
ST. LOUIS, MO 63136



DATE: 3/6/2014

P.O. NO.: SQ 994107
Order/Line NO.: 994421 IN 100

TO: Smith Pump Co *
301 M&B Industrial
Waco, TX, 76712

ATTN: CUSTOMER

Model Number: NA
Catalog Number:
Titan VSS-HT Weather Protected
CONF,MOTOR,TITAN VSS-HT

REVISIONS:

**ALL DOCUMENTS HEREIN ARE CONSIDERED TYPICAL BY NIDEC MOTOR CORPORATION.
THANK YOU FOR YOUR INQUIRY AND THE OPPORTUNITY TO SERVE YOU.**

Features:

Temporary - DO NOT COPY
Horsepower 00250.00~00000.00 ~ KW: 186.5
Enclosure WPI
Poles 04~00 ~ RPM: 1800~0
Frame Size 449~VP
Phase/Frequency/Voltage.. 3~060~460 ~ Random Wound
Service Factor 1.15
Insulation Class Class "F" ~ VPI-2000 w/Abrasion Re
sist.
Altitude In Feet (Max) .. 3300 Ft.(1000 M)
Ambient In Degree C (Max) +50 C
Efficiency Class Premium Efficiency
Application Vertical Centrifugal Pump
Customer Part Number
Base Diameter (Inches) 24.5
Non-Reverse Ratchet
Pricebook Thrust Value (lbs).. 9500
Customer Down Thrust (lbs) ... 5200
Customer Shutoff Thrust (lbs).
Up Thrust (lbs)
Inverter Duty Rating:
Load Type (Base Hz & Below) .. Variable Torque
Speed Range (Base Hz & Below). 10:1
"AK" Dimension (Inches).. NA
Shaft Dimensions:~U=2.125 ~ AH/V=4.500
KEYWAY=0.500 ~ ES=3.000
Temperature Rise (Sine Wave): "B" Rise @ 1.0 SF (Resist)
NEMA Design B
KVA Code Letter "G"
Starting Method Direct-On-Line Start
Duty Cycle Continuous Duty
Efficiency Value 95.0 % ~ Guaranteed
Power Factor (Uncorrected): 85.0 %
Sound Level Value (dBa).. 85 dBa @ 1M Sound Pressure
Load Inertia (lb-ft²): 1017.00 ~ NEMA Inertia: 1017.00 ~ 1.0
0
Number Of Starts Per Hour: NEMA
Motor Type Code HVSI4
Rotor Inertia (LB-FT²) 110. LB-FT²
Qty. of Bearings PE (Shaft) 1
Qty. of Bearings SE (OPP) 1
Bearing Number PE (Shaft) 95BC02J
Bearing Number SE (OPP) 130BT02

Nidec trademarks followed by the ® symbol are registered with the U.S. Patent and Trademark Office.

NIDEC MOTOR CORPORATION

8050 WEST FLORISSANT AVE.
ST. LOUIS, MO 63136



DATE: 3/6/2014

P.O. NO.: SQ 994107
Order/Line NO.: 994421 IN 100

TO: Smith Pump Co *
301 M&B Industrial
Waco, TX, 76712

ATTN: CUSTOMER

Model Number: NA
Catalog Number:
Titan VSS-HT Weather Protected
CONF,MOTOR,TITAN VSS-HT

REVISIONS:

ALL DOCUMENTS HEREIN ARE CONSIDERED TYPICAL BY NIDEC MOTOR CORPORATION.
THANK YOU FOR YOUR INQUIRY AND THE OPPORTUNITY TO SERVE YOU.

Accessories:

100,000 Hours L-10 Brg. Life
Copper Bar Rotor
CCW Rot. FODE w/Rotation Arrow
Ground Lug In Conduit Box
Shaft Grd Ring/Q2 Grd Pad Frm
Insul. Bearings- Both Brackets
115 Volt Space Heaters
Special Balance
Stainless Steel Hardware
Thermostats - Normally Open
.
Conduit Box Information: ~ NEMA Type II Conduit Box
Conduit Opening Size (AA) .. 4.0" NPT
3 Conduit Openings ~ Bottom Of Conduit Box
Buss Bar Connection
Standoff Insulators
Q-2 Accessory Outlet Boxes ~ Same Side As Main O/B
3/4" NPT Conduit Opening
2 Boxes w/600v Terminal Blocks
Lubrication Instruction Plate
Starting Duty Nameplate
Starts in Succession w/ motor
initially @ Amb Temp (1) 002
Starts in Succession w/ motor
initially @ Rated Temp (2) 001
Subsequent Starts after (1)
limited to XX Hour(s) Apart 01
Subsequent Starts after (2)
limited to XX Hour(s) Apart 02
Metrix 162 VTS Vib.Transmitter
Q-2 Upper/Short End Bracket
90 Degrees Apart
No Vib Detect On Lower/PE Brk
Test Requirements:
Short Commer. Test - Unwit
Calibration Test-Unwit.
Sound Test - Unwitnessed
Vibration Test-Unwit. (IPS)
Polarization Index - Unwit
RC

USE THE DATA PROVIDED BELOW TO SELECT THE APPROPRIATE DIMENSION PRINT

Horsepower	250
Pole(s)	04
Voltage(s)	460
Frame Size	449VP
Shaft U Diameter	2.125
Outlet Box AF	*
Outlet Box AA	4
Accessory Outlet Box DM	0.75

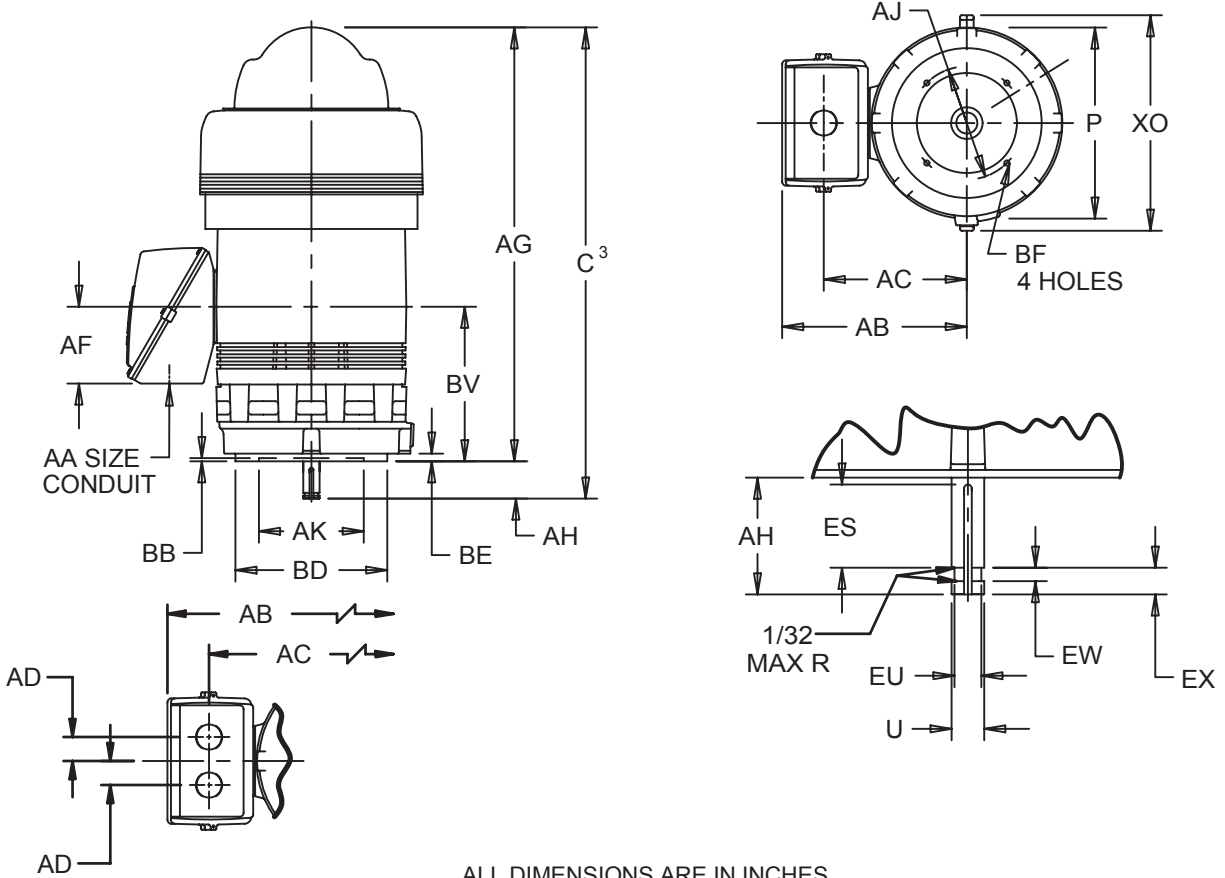
EFFECTIVE:
26-JUL-12

SUPERSEDES:
03-JUL-12

VERTICAL MOTORS
WITH "P" BASE WPI
FRAME: 449VP, VPH
BASIC TYPE: HV4, HVS4

PRINT:
09-1820

SHEET:
1 OF 1



ALL DIMENSIONS ARE IN INCHES

FRAME	P ²	AJ	AK +.005	BB	BD	BE	BF	XO
449VP	29.00	14.750	13.500	.25	24.50	.88	.69	34.00
449VPH					20.00			

AA
2 NPT
3 NPT
3 1/2 NPT
4 NPT

MAIN CONDUIT BOX	AB	AC	AD	AF	AG	BV
SIZE 2.5	24.50	18.75	---	10.00	56.31	19.38
SIZE 3	28.00	20.88	3.00	10.94		

HP	POLES(RPM)				U	AH	EU	EW	EX	ES	SQ
	2(3600)	4(1800)	6(1200)	8(900)							
ALL	300 & DOWN	200 & DOWN	150 & DOWN	---	2.125	4.500	1.750	.375	.750	3.00	.500
---	350 TO 450	250 TO 300	200	---	2.375	5.000	2.000			3.50	.625
---	500	350	250	---	2.625	5.000	2.250			3.50	.625

- 1: ALL ROUGH DIMENSIONS MAY VARY BY .25" DUE TO CASTING AND/OR FABRICATION VARIATIONS.
- 2: LARGEST MOTOR WIDTH.
- 3: FOR DIMENSION "C", ADD THE "AG" AND "AH" DIMENSION.
- 4: CONDUIT OPENING MAY BE LOCATED IN STEPS OF 90 DEGREES, STANDARD AS SHOWN WITH CONDUIT OPENING DOWN.

TOLERANCES	
FACE RUNOUT	.007 T.I.R.
PERMISSIBLE ECCENTRICITY OF MOUNTING RABBET	.007 T.I.R.
PERMISSIBLE SHAFT RUNOUT	.003 T.I.R.
SHAFT END PLAY	.010

09-1820/D

Nidec Motor Corporation
St. Louis, Missouri

INFORMATION DISCLOSED ON THIS DOCUMENT IS CONSIDERED PROPRIETARY AND SHALL NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN CONSENT OF NIDEC MOTOR CORPORATION



ISSUED BY
R. KING
APPROVED BY
P. ALLGEYER

IHP_DP_NMCA (MAR-2011) SOLIDEDGE

NAMEPLATE DATA

CATALOG NUMBER: _____		NAMEPLATE PART #: 422707-006	
MODEL: _____	FR: 449VP	TYPE: H/Sl4	ENCL: WPI
SHAFT END BRG: 95BC02J - QTY 1		OPP END BRG: 130BT02 - QTY 1	
PH: 3	MAX AMB: 50 C	ID#: (ref. Order#: 994421, Type: IN, Line#: 100)	
INSUL CLASS: F	Asm. Pos: _____	DUTY: CONT	
HP: 250	RPM: 1785	HP: _____	RPM: _____
VOLTS: 460	_____	VOLTS: _____	_____
FL AMPS: 269.0	_____	FL AMPS: _____	_____
SF AMPS: 311.0	_____	SF AMPS: _____	_____
SF: 1.15	DESIGN: B	CODE: G	_____
NEMA NOM EFFICIENCY: 95.8	NOM PF: 91.3	KiloWatt: 186.500	_____
GUARANTEED EFFICIENCY: 95.0	MAX KVAR: _____	HZ: 60	_____

HAZARDOUS LOCATION DATA (IF APPLICABLE):

DIVISION: _____	CLASS I: _____	GROUP I: _____
TEMP CODE: _____	CLASS II: _____	GROUP II: _____

VFD DATA (IF APPLICABLE):

VOLTS: 460	_____
AMPS: 282.5	_____
TORQUE 1: 736.1LB-FT	TORQUE 2: _____
VFD LOAD TYPE 1: VT/PWM	VFD LOAD TYPE 2: _____
VFD HERTZ RANGE 1: 6-60	VFD HERTZ RANGE 2: _____
VFD SPEED RANGE 1: 180-1800	VFD SPEED RANGE 2: _____
SERVICE FACTOR: 1.00	FL SLIP: _____
NO. POLES: _____	MAGNETIZING AMPS: _____
VECTOR MAX RPM: _____	Encoder PPR: _____
Radians/ Seconds: _____	Encoder Volts: _____

TEAO DATA (IF APPLICABLE):

HP (AIR OVER): _____	HP (AIR OVER M/S): _____	RPM (AIR OVER): _____	RPM (AIR OVER M/S): _____
FPM AIR VELOCITY: _____	FPM AIR VELOCITY M/S: _____	FPM AIR VELOCITY SEC: _____	_____

ADDITIONAL NAMEPLATE DATA:

Decal / Plate	WD=499495	Customer PN	
Notes		Non Rev Ratchet	NRR
Max Temp Rise	70C RISE/RES@1.00SF	OPP/Upper Oil Cap	12 QT/11.4 L
Thermal (WDG)	OVER TEMP PROT 2	SHAFT/Lower Oil Cap	GREASE
Altitude			
Regulatory Notes		Regulatory Compliance	
COS		Marine Duty	
Balance	0.08 IN/SEC	Arctic Duty	
3/4 Load Eff.	96.1	Inrush Limit	
Motor Weight (LBS)	2800	Direction of Rotation	
Sound Level	85 DBA @ 1M	Special Note 1	
Vertical Thrust (LBS)	9500	Special Note 2	
Thrust Percentage	100% HT	Special Note 3	
Bearing Life	100K	Special Note 4	
Starting Method		Special Note 5	
Number of Starts		Special Note 6	
200/208V 60Hz Max Amps		SH Max. Temp.	
190V 50 hz Max Amps		SH Voltage	SH VOLTS=115V
380V 50 Hz Max Amps		SH Watts	SH WATTS=288W
NEMA Inertia		Load Inertia	
Sumpheater Voltage		Sumpheater Wattage	
Special Accessory Note 1		Special Accessory Note 16	
Special Accessory Note 2		Special Accessory Note 17	
Special Accessory Note 3		Special Accessory Note 18	
Special Accessory Note 4		Special Accessory Note 19	
Special Accessory Note 5		Special Accessory Note 20	
Special Accessory Note 6		Special Accessory Note 21	
Special Accessory Note 7		Special Accessory Note 22	
Special Accessory Note 8		Special Accessory Note 23	
Special Accessory Note 9		Special Accessory Note 24	
Special Accessory Note 10		Special Accessory Note 25	
Special Accessory Note 11		Special Accessory Note 26	
Special Accessory Note 12		Special Accessory Note 27	
Special Accessory Note 13		Special Accessory Note 28	
Special Accessory Note 14		Special Accessory Note 29	
Special Accessory Note 15		Special Accessory Note 30	

**NIDEC MOTOR CORPORATION
ST. LOUIS, MO**



TYPICAL NAMEPLATE DATA
ACTUAL MOTOR NAMEPLATE LAYOUT MAY VARY
SOME FIELDS MAY BE OMITTED

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MOTOR PERFORMANCE

MODEL NO.	CATALOG NO.	PHASE	TYPE	FRAME
NA	NA	3	HVSI4	449VP

ORDER NO.	994421	LINE NO.	100
-----------	--------	----------	-----

MPI:		180118
HP:		250
POLES:		4
VOLTS:		460
HZ:		60
SERVICE FACTOR:		1.15
EFFICIENCY (%):		
	S.F.	95.4
	FULL	95.8
	3/4	96.1
	1/2	95.7
	1/4	93.5
POWER FACTOR (%):		
	S.F.	90.7
	FULL	91.3
	3/4	91.5
	1/2	89.2
	1/4	77.5
	NO LOAD	7.6
	LOCKED ROTOR	22
AMPS:		
	S.F.	311
	FULL	269
	3/4	200
	1/2	137
	1/4	81
	NO LOAD	47.5
	LOCKED ROTOR	1818.8
NEMA CODE LETTER		G
NEMA DESIGN LETTER		B
FULL LOAD RPM		1785
NEMA NOMINAL EFFICIENCY (%)		95.8
GUARANTEED EFFICIENCY (%)		95
MAX KVAR		32.2
AMBIENT (°C)		50
ALTITUDE (FASL)		3300
SAFE STALL TIME-HOT (SEC)		30
SOUND PRESSURE (DBA @ 1M)		81
TORQUES:		
	BREAKDOWN{% F.L.}	175
	LOCKED ROTOR{% F.L.}	80
	FULL LOAD{LB-FT}	736.1

NEMA Nominal and Guaranteed Efficiencies are up to 3,300 feet above sea level and 25 ° C ambient

The Above Data Is Typical, Sinewave Power Unless Noted Otherwise

NIDEC MOTOR CORPORATION
ST. LOUIS, MO

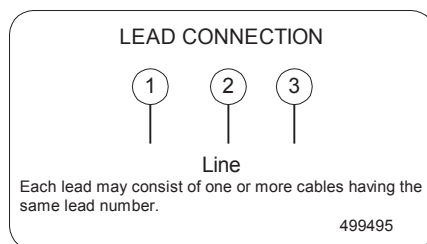
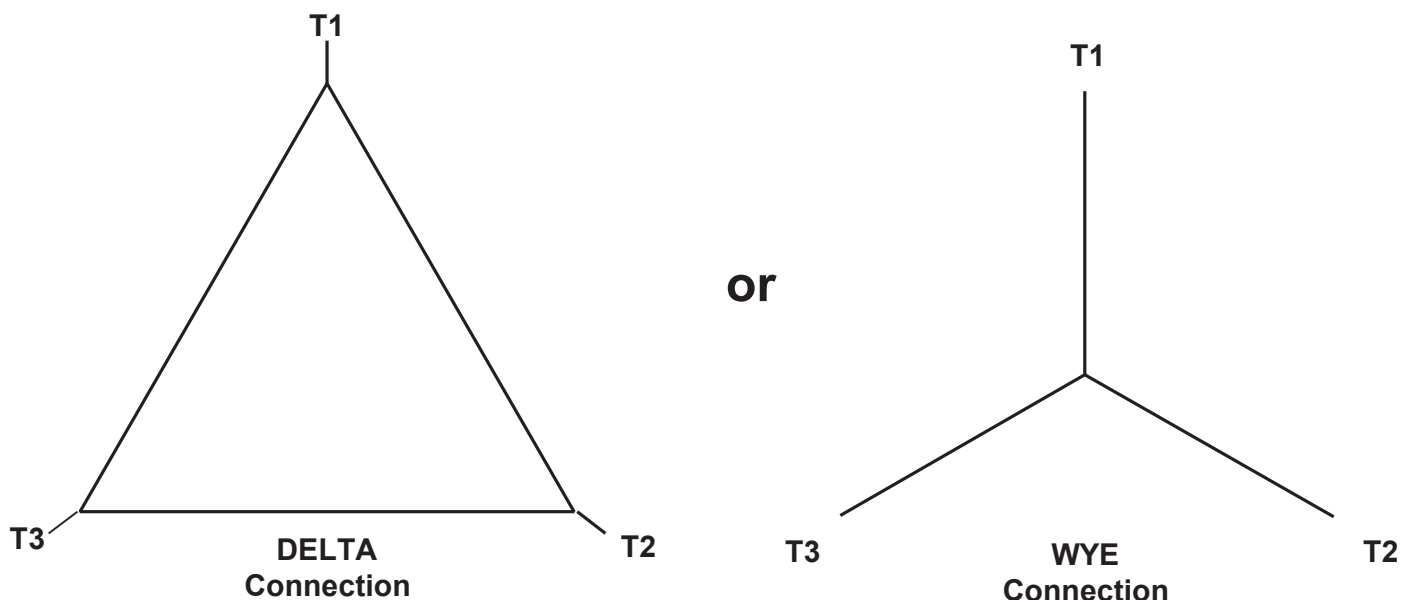


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499495

Motor Wiring Diagram



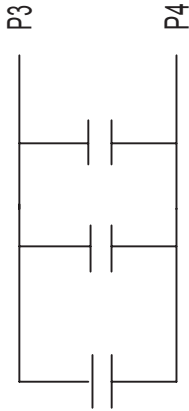
To reverse direction of rotation interchange connections L1 and L2.

Each lead may be comprised of one or more cables.
Each cable will be marked with the appropriate lead number.

THERMOSTATS

- MOTOR IS EQUIPPED WITH QTY-3 (1 PER PHASE) NORMALLY OPEN THERMOSTATS IN THE MOTOR WINDING. THERMOSTATS ARE SET TO CLOSE AT HIGH TEMPERATURE.
- THERMOSTATS MUST NOT BE USED TO SWITCH ABOVE 18 AMPS AT 24 VDC OR 12 AMPS AT 230 VAC.

NORMALLY OPEN
THERMOSTATS



ACCESSORY LISTING

QTY-3 N.O. THERMOSTATS

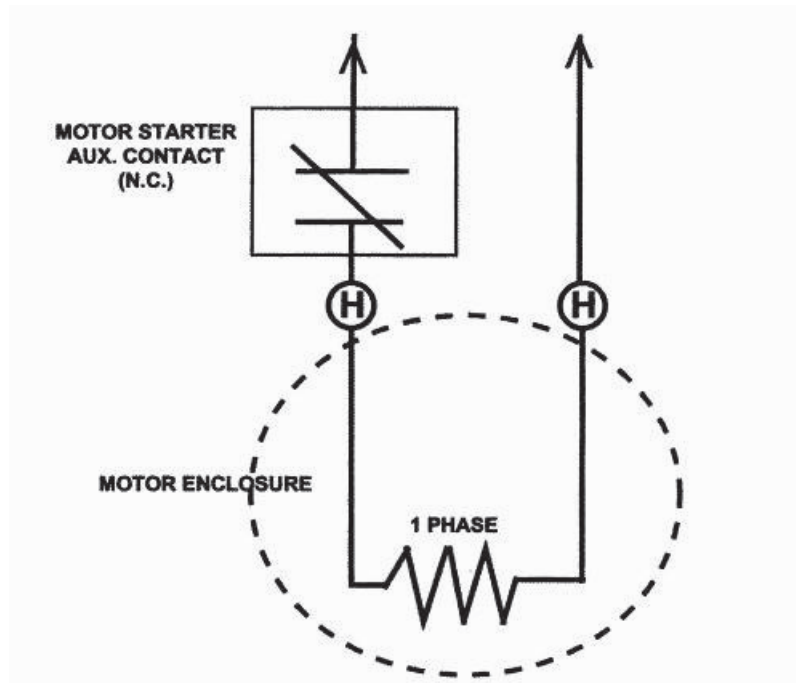
REVISION DESCRIPTION FOR: MISC		SCALE		UNITS		TITLE		NIDEC MOTOR CORPORATION	
STL0211 - UPDATED FORMAT.		NONE		IN		CUSTOMER CONNECTION DIAGRAM		REVISION DATE 23-FEB-11	
		TOLERANCES ON DIMENSIONS (UNLESS OTHERWISE SPECIFIED)		INCHES		ISSUED BY R. KING		REV C	
				mm		APPROVED BY C. CADE		SHEET NUMBER 1 OF 1	
MATERIAL: ---		ANGLES X°= ±1°				DWG NO. 0834065		DWG SIZE A	
MUST BE COMPLIANT TO RoHS DIRECTIVE EU 2002/95/IEC AND REGULATION EC 1907/2006 (REACH) AS AMENDED									



970798

SPACE HEATER CONNECTION DIAGRAM

SPACE HEATER LEADS MAY BE LOCATED IN EITHER THE MAIN OUTLET BOX
OR IF SO EQUIPPED, AN AUXILIARY BOX



THIS EQUIPMENT IS SUPPLIED WITH ANTI-CONDENSATION HEATERS. HEATERS SHOULD BE ENERGIZED WHEN EQUIPMENT IS NOT OPERATING TO PROTECT UNIT BY PREVENTING INTERNAL CONDENSATION. CONNECT THE "H" OR HEATER LEADS TO

115V VOLTS	288W WATTS RATING
------------	-------------------

SPACE HEATER NAMEPLATE (ON MOTOR)

Revision: 7/30/2008
Mike Cullen

Vibration Transmitter

162VTS Slim Style Loop-powered



SEISMIC PRODUCTS

The 162VTS is the ideal solution for sensing vibration on most plant equipment. It generates a two-wire loop signal proportional to velocity for transfer to a programmable logic controller (PLC), distributed control system (DCS) or other 4-20 mA input devices. Simply mount the transmitter on the machine case, connect the 2-wire loop and read and/or record the vibration.

Features/Benefits

- Loop terminals w/Independent Polarity (IPT®)
- Interfaces with PLC, DCS, 4-20 mA monitors, etc.
- Different mounting studs available
- Flying leads or terminal block connector
- Most stable detection circuit available
- “Ski slope” problem protected
- Built-in base & housing strain protection
- Improved shielding and stability

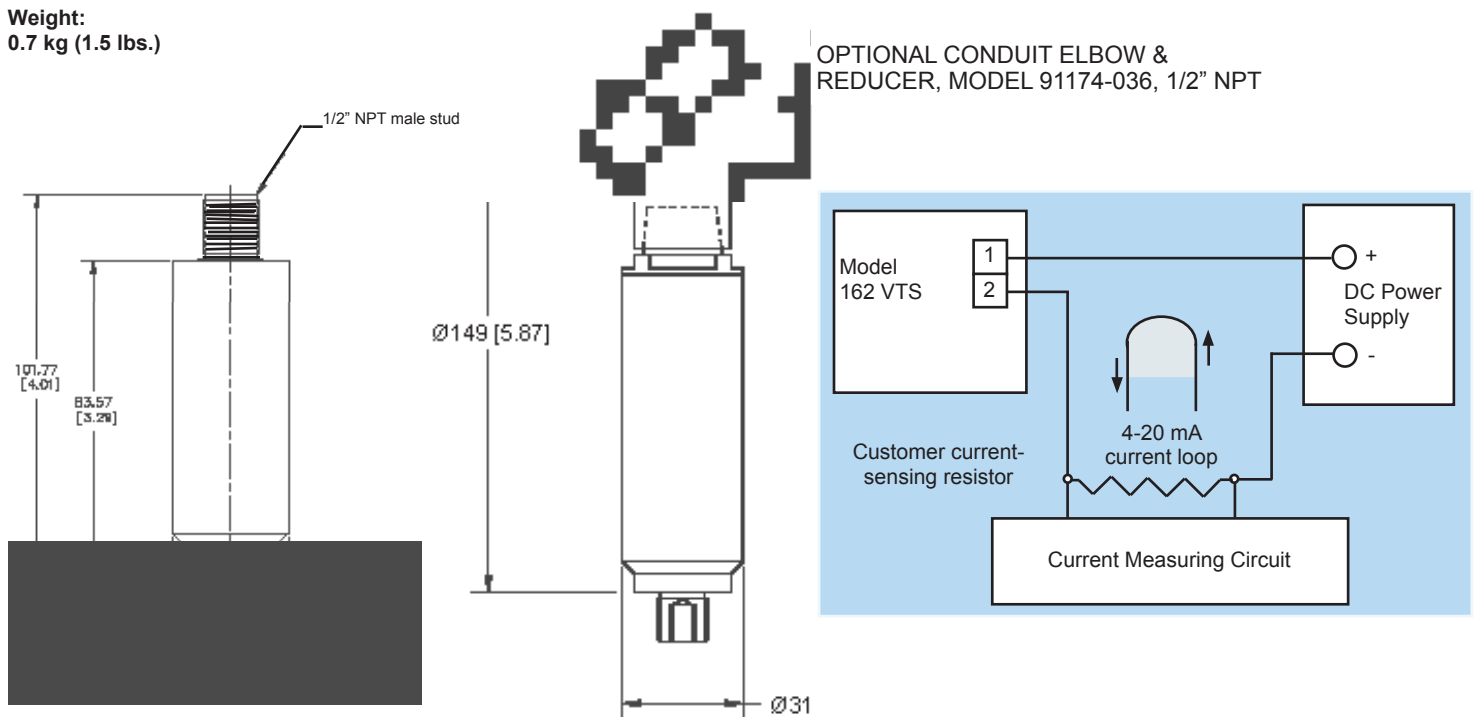
Applications

- Blowers
- Centrifuges
- Compressors
- Engines
- Fans
- Generators
- Motors
- Pumps
- Steam Turbines
- Turbochargers

IPT® (Independent Polarity Terminal) is a registered trademark of Metrix Instrument Co.

Weights & Dimensions

Weight:
0.7 kg (1.5 lbs.)



Specifications

Vibration Range: 4 to 20 mA output proportional to velocity. Refer to "How to Select A" for ranges. Nonstandard ranges available.

Frequency Response:
Standard: 2 - 1500 Hz

Axis Orientation: Any

Supply Voltage (Vs): 11 to 30 VDC,

Non-polarity sensitive, IPT®

Isolation: 500Vrms, circuit to case

Electrical Connection: 2 pin terminal block (accepts up to 16 AWG wire). A cable gland is also available.

Maximum Load Resistance (R_L): R_L = 50 x (Vsupply-11) ohms

Service Temp. Rating: -40° to 100°C (-40° to 212°F)

Enclosure Materials: 303 SS

Enclosure Environmental Rating: NEMA 4X, IP 65, IP 67 for 2 pin terminal block or flying lead option available.

Approvals: Refer to "How to Select C".

How To Select



A **Full Scale***

1	2	1	= 1.0 ips (25.4 mm/s), pk
1	2	3	= 2.0 ips (50.8 mm/s), pk
1	2	6	= 0.8 ips (20.3 mm/s), pk
2	0	0	= 1.60 ips (40.6 mm/s), pk

*Note: For true RMS velocity calibration, add 30 to dash number. Ex: -121 becomes -151.

B **Mounting**

0	= Integral 1/4" NPT
2	= 3/8 - 24 UNF X 3/8"
4	= M8X 1 - 10

C **Hazardous Area Rating**

3	= CSA/NRTL/C Class 1, (A, B, C & D), Div 2
4	= Class 1, Div 1, Grps B-D and Class 2, Div 1, Grps C-G. Available on the 1/2" NPT Top only. (D = 5)
5	= Non-Hazardous

D **Connection**

5	= 4-20 mA; 1/2" NPT top, 24" leads
6	= 4-20 mA; 2 pin terminal block (C = 3)

Optional Stud Adapters

STUD	BUSHING
8253-002	1/4" NPT to 1/2" NPT
8841-084	3/8 - 24 UNF to 1/2 - 20 UNF
8841-099	M8 to M10 x 1.25
93818-015	Cable Gland



Internal View - 2 pin Terminal Block

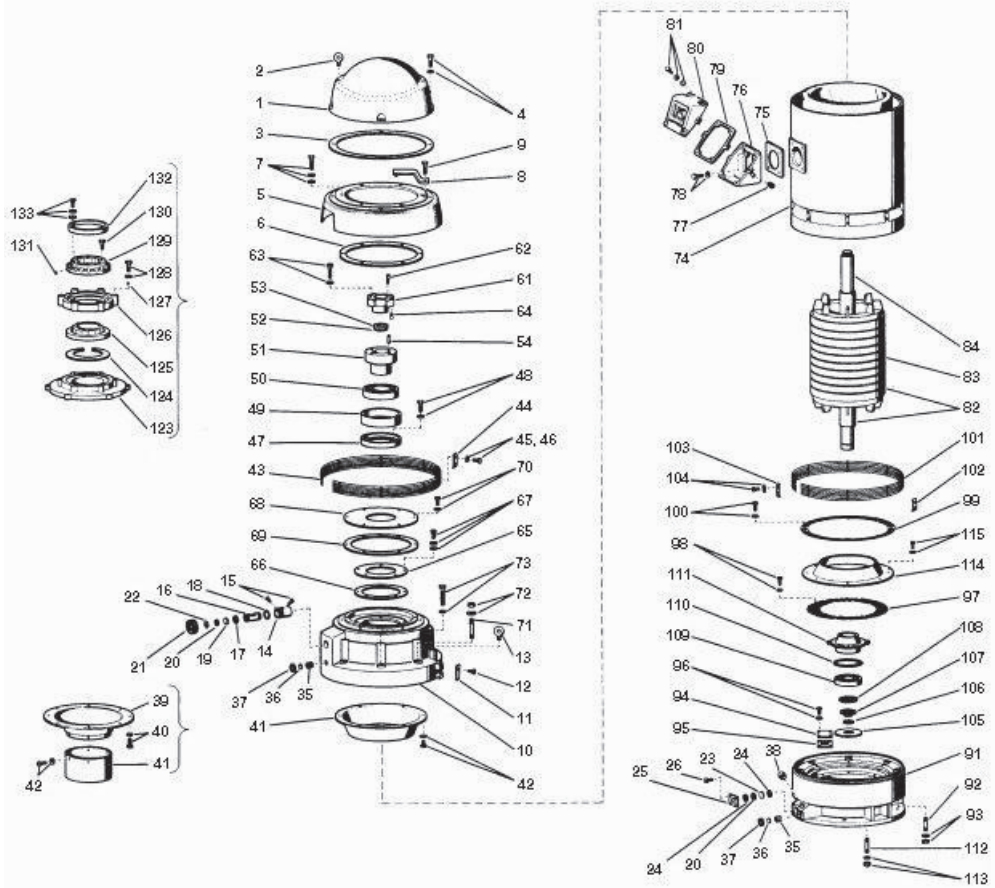


Full Body View

SEISMIC PRODUCTS

RENEWAL PARTS

FRAMES 449 THRU 6810 - OPEN DRIPPROOF MOTORS
 TYPES: HU, HUE, HUI, HUEI, HUS, HUSI, HV, HV4, HVE, HVE4, HVEI, HVEI4, HV, HM4, HVS4, HVS4
 HOLLOSHAFT & SOLIDSHAFT MOTORS



ITEM NO.	QTY	NAME OF PART
1	1	Canopy Cap
2	2	Eyebolt (Not used on frames 5006P, FH, 5008P & 5008FH)
3	1	Gasket
4	4	Hex Head Cap Screw & Lockwasher
5	1	Bracket Cover (Used on frame 6808P, FH)
6	1	Gasket (Used on frame 6808P, FH)
7	6	Hex Head Cap Screw, Plain & Lockwasher (Used on frame 6808P, FH)
8	1	Locking Arm
9	1	Hex Head Cap Screw
10	1	Upper Bracket Assembly
11	2	Safety Plate (Used on frame 6808P, FH)
12	2	Flat Head Cap Screw (Used on frame 6808P, FH)
13	2	Eyebolt (Used on frame 6808P, FH)
14	2	Oil Fill Frawer Housing(6808FH & Qty. 1 on 6808P)
15	4	Flat head Machine Screw (6808FH & Qty. 2 on 6808P)

ITEM NO.	QTY	NAME OF PART
16	2	Oil Fill Drawer (6808FH & Qty. 1 on 6808P)
17	2	Locking Ring (6808FH & Qty. 1 on 6808P)
18	2	"O" Ring (6808FH & Qty. 1 on 6808P)
19	2	Oil Drawer Filter Assembly (6808FH & Qty. 1 on 6808P)
20	2	Sight Gauge Window
21	2	Ferrule (6808FH & Qty. 1 on 6808P)
22	2	"O" Ring (6808FH & Qty. 1 on 6808P)
23	2	Reflector Disc (Qty. 1. on 6808P, not used on 6808FH)
24	4	Gasket (Qty. 2 on 6808P, not used on 6808FH)
25	2	Special Housing (Qty. 1 on 6808P, not used on 6808FH)
26	8	Oval Head Screw (Qty. 4 on 6808P, not used on 6808FH)
27-34	-	NOT USED ON THIS ASSEMBLY
35	2	Pipe Nipple
36	2	Gasket
37	2	Drain Cap
38	2	Special Plug (Fill) (Qty. 1 on 6808P, FH)

RENEWAL PARTS

FRAMES 449 THRU 6810 - OPEN DRIPPROOF MOTORS
 TYPES: HU, HUE, HUI, HUEI, HUS, HUSI, HV, HV4, HVE, HVE4, HVEI, HVEI4, HVI, HM4, HVS4, HVS4I
 HOLLISHAFT & SOLIDSHAFT MOTORS

ITEM NO.	QTY	NAME OF PART
39	1	Cast Air Deflector (Used on 6808P, FH)
40	8	Hex Head Cap Screw & Lockwasher (Used on 6808P, FH)
41	1	Air Deflector
42	6	Screw & Lockwasher (Qty. 8 on 6808P, FH)
43	1	Grill
44	1	Grill Cleat (Qty. 5 on 6808P, FH)
45	2	Hex Head Cap Screw & Lockwasher (Qty. 10 on 6808P, FH) Not used on frames 5808P, FH & 5809P, FH)
46	16	Pan Head Machine Screw (Qty. 8 on 5006P, FH & 5008P, FH). Not used on frame 6808P, FH)
47	1	Metering Plate
48	1	Hex Head cap Screw & Lockwasher (Not used on frame 6808P, FH)
49	1	Bearing Spacer
50	2	Ball Bearing (Refer to section 775)
51	1	Bearing Mounting
52	1	Lockwasher (Sold with item no. 53)
53	1	Lock Nut (Sold with item no. 52)
54	1	Square Key
55-60	-	NOT USED ON THIS ASSEMBLY
61	1	Coupling (Holloshaft Only)
62	1	Gib Key
63	2	Hex Head Cap Screw & Lockwasher (Qty. 3 on 5006P, FH & 5008P, FH)
64	4	Slotted Headless Screw (Qty. 3 on 5006P, FH & 5008P, FH)
65	1	Oil Baffle (Used on frame 6808P, FH)
66	1	Gasket (Used on frame 6808P, FH)
67	5	Hex Head Cap Screw, Plain & Lockwasher (Used on frame 6808P, FH)
68	1	Dust Ring
69	1	Gasket
70	6	Hex Head Cap Screw & Plain Washer (Qty. 8 on 5006P, FH & 5008P, FH)
71	4	Stud (Qty. 8 on 6808P, FH) Not used on frames 5808P, FH & 5809P, FH)
72	4	Hex Nut & Lockwasher (Qty. 8 on 6808P, FH) Not used on frames 5808P, FH & 5809P, FH)
73	4	Hex Head Cap Screw & Lockwasher (Not used on frames 5808P, FH & 5809P, FH)
74	1	Wound Stator Assembly
75	1	Gasket
76	1	Outlet Box Base
77	1	Countersunk Hex Pipe Plug
78	4	Hex Head Screw & Lockwasher
79	1	Gasket
80	1	Outlet Box Cover
81	6	Hex Head Cap Screw, Plain & Lockwasher
82	1	Rotor Assembly (Includes items 83 & 84)
83	1	Rotor Core

ITEM NO.	QTY	NAME OF PART
84	1	Rotor Shaft
85-90	-	NOT USED ON THIS ASSEMBLY
91	1	Bracket Assembly
92	4	Stud (Qty. 8 on 6808P, FH)
93	4	Hex Nut & Lockwasher (Qty. 8 on 6808P, FH)
94	1	Cover Plate (Not used on frame 6808P, FH)
95	1	Gasket (Not used on frame 6808P, FH)
96	4	Hex Head Cap Screw & Lockwasher (Not used on frame 6808P, FH)
97	1	Screen
98	5	Screw & Plain Washer (Qty. 8 on 5808P, FH & 5809P, FH). Qty. 7 on 6808P, FH)
99	1	Grill or Screen (Not used on 5808P, FH & 5809P, FH)
100	8	Hex Head Cap Screw & Plain Washer (Qty. 16 on frame 6808P, FH) (Not used on frame 5808P, FH & 5809P, FH)
101	1	Grill (Used on frame 6808P, FH)
102	8	Grill Cleat (Used on frame 6808P, FH)
103	1	Joint Grill Cleat (Used on frame 6808P, FH)
104	18	Round Head Screw & Lockwasher (Used on 6808P, FH)
105	1	Oil Baffle Plate
106	1	Dust Sealing Ring
107	1	Snap Ring
108	1	Bearing Spacer (Used on frames 5808P, FH & 5809P, FH)
109	1	Ball Bearing (Refer to section 775)
110	1	"C" Ring
111	1	Bearing Cap
112	4	Stud
113	4	Cap or Hex Nut & Lockwasher
114	1	Air Deflector
115	8	Screw & Lockwasher
116-122	-	NOT USED ON THIS ASSEMBLY
FOR NON-REVERSE RATCHET (OPTIONAL) OMT ITEMS 68, 69, (6808P, FH ONLY); 8, 9 (5006P, FH & 5008P, FH) & Add:		
123	1	Ratchet Adaptor Assembly (Not used on frame 6808P, FH)
124	1	"C" Spring
125	1	Stationary Ratchet Assembly
126	1	Pressure Plate Assembly
127	6	Compression Spring (Qty. 4 on 5006P, FH & 5008P, FH)
128	6	Hex Head Cap Screw & Plain Washer (Qty. 4 on 5006P, FH & 5008P, FH)
129	1	Rotating Ratchet
130	4	Hex Head Cap Screw (Qty. 3 on 5006P, FH & 5008P, FH)
131	12	Steel Ball (Qty. 14 on 5808P, FH & 5809P, FH) Qty. 16 on 6808P, FH)
132	1	Ball Bearing Ring
133	6	Hex Head Cap Screw, Plain & Lockwasher (Qty. 7 on 5808P, FH & 5809P, FH) Qty. 8 on 6808P, FH)

WARNING:

Any disassembly or repair work on explosionproof motors will void the Underwriters Laboratories, Inc. label unless done by the manufacturer, or a facility approved by the Underwriters Laboratories, Inc. Refer to your nearest sales office for assistance.

BEARINGS:

Refer to motor nameplate for the bearing numbers.

PRICES:

Parts stocking distributors: refer to renewal parts numerical index. All Others: refer to your nearest parts distributor.

TYPICAL REED CRITICAL FREQUENCY DATA

+/- 20% accuracy on below Reed Critical Frequency (RCF) value unless otherwise noted.
Note: Motor RCF Test Data can be provided at time of motor shipment through special test.
Please contact your Nidec Motor Corporation representative for more information.

MODEL NO: NA
CATALOG NO: NA

Frame: 449VP Type: HVSI4

REED CRITICAL FREQUENCY:	37	HZ
CENTER OF GRAVITY:	25	IN
DEFLECTION @ CENTER OF GRAVITY:	0.0071	IN
UNIT WEIGHT:	3000	LBS.
BASE DIAMETER:	24.5	IN.
MAXIMUM MOTOR DIAMETER:	29	IN.
DATE:	3/6/2014	



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Suitability of Integral Horsepower (IHP)* Motors on Variable Frequency Drives

Variable Frequency Drives (VFD)

All Nidec Motor Corporation inverter duty motors have 40°C ambient, 1.0 SF on Inverter Power, 3300 ft. max altitude, 460 voltage or less line power, up to 10:1 speed range on Variable Torque and Class F Insulation.

Nidec Motor Corporation's INVERTER GRADE® insulated motors exceeded NEMA® MG-1 Part 30 & 31 before the standards were established.

We are a leader in the development of electric motors to withstand pulse width modulated (PWM) drives evolution from power transistors to higher switching frequency insulated gate bipolar transistors (IGBTs).

Today, as the need for medium duty motor inverter applications grows, Nidec Motor Corporation provides products to meet these demands.

Through continued research and development, Nidec Motor Corporation has included the insulation wire from its INVERTER GRADE® motors in all Premium Efficient motors, enhancing their potential inverter compatibility.

Inverter compatibility with motors is complex. As a result, many variables must be considered when determining the suitability of certain types of motors. These variables include:

- Torque requirements (Constant or Variable)
- Speed Range
- Line/System Voltage
- Cable Length between VFD & Motor
- Drive Switching (Carrier) Frequency Motor Construction
- VFD dv/dt
- High Temperatures High Humidity

Wider speed ranges, higher voltages, higher switching frequencies and increased cable lengths all add to the severity of the application and therefore the potential for premature motor failure. Nidec Motor Corporation has differentiated its products into families for your ease of selection for various inverter applications.

Warranty Guidelines

The information within this section refers to the motor and drive application guidelines and limitations for warranty.

Hazardous Location Motors

Use of a variable frequency drive with the motors in this catalog, intended for use in hazardous locations, is only approved for Division 1, Class I, Group D hazardous location motors with a T2B temperature code, with a limitation of 2:1 constant torque or 10:1 variable torque output. No other stock hazardous location motors are inherently suitable for operation with a variable frequency drive. If other requirements are needed, including non-listed Division 2, please contact your Nidec Motor Corporation territory manager to conduct an engineering inquiry.

575 Volt Motors

575 volt motors can be applied on inverters when output filters are used.

Applying INVERTER GRADE® Insulated Motors on Variable Frequency Drives (2, 4, 6 pole)

The products within this catalog labeled "Inverter Duty" or "Vector Duty" are considered INVERTER GRADE® insulated motors. INVERTER GRADE® motors exceed the NEMA® MG-1 Part 31 standard.

Nidec Motor Corporation provides a three-year limited warranty on all NEMA® frame INVERTER GRADE® insulated motors and allows long cable runs between the motor and the VFD (limited to 400 feet typical without output filters). Cable distance can be further limited by hot and humid environments and VFD manufacturers cable limits. These motors may be appropriate for certain severe inverter application or when the factors relating to the end use application are undefined (such as spares).

Nidec Motor Corporation's U.S. Motors® brand is available in the following INVERTER GRADE® insulated motors:

- Inverter Duty NEMA® frame motors good for 10:1 Variable Torque & 5:1 Constant Torque, including Vertical Type RUSI
- Inverter Duty motors rated for 10:1 Constant Torque
- ACCU-Torq® and Vector Duty Motors with full torque to 0 Speed
- 841 Plus® NEMA® Frame Motors

Applying motors that do not have INVERTER GRADE® insulation on Variable Frequency Drives (2, 4, 6 pole)

Meet NEMA® MG-1, Section IV, Part 31.4.4.2. They can be used with adjustable frequency drives under the following parameters: On NEMA® frame motors, 10:1 speed rating on variable torque loads & 4:1 speed range on constant torque loads. On TITAN® frame motors, 10:1 speed rating on variable torque loads. On TITAN® frame motors, inquiry required for suitability on constant torque loads. Cable distances are for reference only and can be further limited by hot and humid environments. Refer to specific VFD manufacturers cable limits.

Cable Distances			
Maximum Cable Distance VFD to Motor			
Switching Frequency	460 Volt	230 Volt	380 Volt
3 Khz	127 ft	400 ft	218 ft
6 Khz	90 ft	307 ft	154 ft
9 Khz	73 ft	251 ft	126 ft
12 Khz	64 ft	217 ft	109 ft
15 Khz	57 ft	194 ft	98 ft
20 Khz	49 ft	168 ft	85 ft

Applying Standard & Energy Efficient Motors on Variable Frequency Drives is not recommended. VFD related failures on standard and energy efficient motors 444 frame and above will not be covered under warranty.

*This information applies only to Integral Horsepower (IHP) motors as defined on the Agency Approval page, under UL® & CSA® listings where indicated.

† All marks shown within this document are properties of their respective owners.



Motor / Inverter Compatibility

Thermal Overloads and Single Phase Motors

Motors with thermal overloads installed may not operate properly on a VFD. The current carrying thermal overload is designed for sine wave power. Operation on a VFD may cause nuisance tripping or potentially not protect the motor as would be expected on line power. Thermo-stats or thermistors installed in the motor and connected properly to the VFD may provide suitable thermal overload protection when operating on a VFD. (Consult Codes)

Single phase motors and other fractional horsepower ratings are not designed to be operated on a VFD. Within Nidec Motor Corporation standard products, all motors NEMA^{®†} 48 frame (5.5" diameter) and smaller are not suitable for VFD applications. Three phase 56 and 143/145 frame applications should be noted on the catalog price page; or if in doubt ask an Nidec Motor Corporation technical representative for recommendations on compatibility with a VFD.

Slow Speed Motors

Motors with a base design of slower than six poles require special consideration regarding VFD sizing and minimizing harmonic distortion created at the motor terminals due to cable installation characteristics. Additional external PWM waveform filters and shielded motor cables designed for PWM power may be required to provide acceptable motor life. Harmonic distortion on the output waveform should be kept to a minimum level (less than 10%).

690V Applications

Motors that will be applied to 690VAC PWM VFDs require the use of an external filter to limit peak voltage spikes and the use of an INVERTER GRADE[®] motor. Where available, an alternative to using an output filter is to upgrade to a 2300V insulation system.

Low Voltage TITAN[®] Motors

When using 449 frame and larger motors on PWM type VFDs consider the use of an external filter and shielded motor cables designed for PWM power to minimize harmonic distortion and peak voltages at the motor terminals. Harmonic distortion on the output waveform should be kept to a minimum level (less than 10%).

Bearing Currents related to PWM waveform

Due to the uniqueness of this condition occurring in the field, protection of the motor bearings from shaft currents caused by common mode voltages is not a standard feature on sine wave or Inverter Duty motor products, unless explicitly noted. Some installations may be prone to a voltage discharge condition through the motor bearings called fluting.

Fluting damage is related to characteristics of the PWM waveform, VFD programming and characteristics and installation.

Bearing fluting as a result of VFD waveform characteristics may be prevented by the installation of a shaft grounding device such as a brush or ring and/or correction of the installation characteristics causing the shaft voltage condition. Insulated bearing(s) may be required. VFD filters may be needed if bearing fluting is to be avoided.

Multiple Motors on a Single VFD

Special considerations are required when multiple motors are powered from a single VFD unit. Most VFD manufacturers can provide guidelines for proper motor thermal considerations and starting/stopping of motors. Cable runs from the VFD and each motor can create conditions that will cause extra stress on the motor winding. Filters may be required at the motor to provide maximum motor life.

Grounding and Cable Installation Guidelines

Proper output winding and grounding practices can be instrumental in minimizing motor related failures caused by PWM waveform characteristics and installation factors. VFD manufacturers typically provide detailed guidelines on the proper grounding of the motor to the VFD and output cable routing. Cabling manufacturers provide recommended cable types for PWM installations and critical information concerning output wiring impedance and capacitance to ground.

Vertical Motors on VFDs

Vertical motors operated on VFD power present unique conditions that may require consideration by the user or installation engineer:

- Non-reversing-ratchet operation can interfere at low speeds (up to 300 RPM) causing locked rotor and drive tripping.
- Unexpected / unacceptable system vibration and or noise levels caused by the torque pulsation characteristics of the PWM waveform, a system critical frequency falling inside the variable speed range of the process or the added harmonic content of the PWM waveform exciting a system component
- Application related problems related to the controlled acceleration/ deceleration and torque of the motor on VFD power and the building of system pressure/ load.
- The impact the reduction of pump speed has on the down thrust reflected to the pump motor and any minimum thrust requirements of the motor bearings
- Water hammer during shutdown damaging the non-reversing ratchet

Humidity and Non-operational Conditions

The possible build-up of condensation inside the motor due to storage in an uncontrolled environment or non-operational periods in an installation, can lead to an increased rate of premature winding or bearing failures when combined with the stresses associated with PWM waveform characteristics. Moisture and condensation in and on the motor winding over time can provide tracking paths to ground, lower the Megohm resistance of the motor winding to ground, and lower the Corona Inception Voltage level of the winding.

Proper storage and maintenance guidelines are important to minimize the potential of premature failures. Space heaters or trickle voltage heating methods are the preferred methods for drying out a winding that has low megohm readings. Damage caused by these factors are not covered by the limited warranty provided unless appropriate heating methods are properly utilized during non-operational periods and prior to motor start-up.

**NEMA^{®†} Application Guide for AC Adjustable Speed Drive
Systems: <http://www.nema.org/stds/acadjustable.cfm#download>**

*This information applies only to Integral Horsepower (IHP) motors as defined on the Agency Approval page, under UL^{®†} & CSA^{®†} listings where indicated.

† All marks shown within this document are properties of their respective owners.



VARIABLE FREQUENCY DRIVES

**ATTACHMENT A
SUBMITTAL DATA SHEET FOR
26 29 23.11 LOW VOLTAGE VARIABLE FREQUENCY DRIVES**

Submit the following data with Bid Proposal and with Shop Drawing submittal:

Item No.	Description	"VFD-102" & "VFD-103"
1	Manufacturer:	Allen Bradley PF753
2	Equipment Dimensions (inches): Length x Width x Height	91.5" H x 85"W x 24"D
3	Total Weight (lbs.):	2800# each

END OF ATTACHMENT



Low Voltage VFD

Project:	Smith Pump Pfennig Pump Station Improvements Pump/Pflugerville, TX
Scope:	Spec Section 16483 - Variable frequency drive
Quote:	QMOJR0148

Pflugerville , TX
VTP-102 and VTP-103

3 VFD Product Details

VFD Common Features/Modifications:

Enclosure	NEMA Type 1/IP20
1	Circuit Breaker
1	Door Mounted HIM
1	Speed Pot 1 Turn
1	Input Fuse Drive
1	H/O/A SS
12	CR1,CR2,CR3,CR4,CR5,CR6,CR7,CR8,CR9,CR10,CR11 AND CR12
1	Start Pushbutton (R)
1	Stop Pushbutton (G)
4	TR1,TR2,TR3,TR4
	Cooling fans and Filter
1	Emergency Stop pushbutton (push/pull type)
1	(W)power on
10	(W)pump ready,(R)pump run,(G)pump stop,(A) winding high temp,(A) valve failure,(R)valve
1	Valve Failure Reset pushbutton (black)
1	Vibration Shutdown Reset pushbutton (black)
1	Ethernet Communication Module
1	Separate 20" wide full vertical section for controls only
	18 pulse design
1	Elapsed time running meter (electro mechanical)
1	CPT (motor space heater and vibration relay)

Spare Parts

1. Ten of each type of power and control fuse rated 600V or less.
2. Two of each type of panel lamp.
3. One of each type of printed circuit board, including diagnostic systems.
6. One spare relay and timer of each type.
7. One of each fan or blower installed.



Low Voltage VFD

Project:	Smith Pump Pfennig Pump Station Improvements Pump/Pflugerville, TX
Scope:	Spec Section 16483 - Variable frequency drive
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4 Addenda, Clarifications and Exceptions to Commercial T&C's

For the scope of equipment outlined in this proposal, prices noted are in USD funds. Prices exclude freight, duty and taxes unless otherwise specified.

This quotation is valid for 30 days after proposal generation date. Scope of supply will be built as defined by this proposal. Should errors and omissions be identified they will be quoted as price adders.

*Should changes to the drive package (s) specified herein be required due to a system supplier requirement or information not contained in the specification Rockwell Automation reserves the right to adjust price accordingly.

*All other commercial items to be handled locally

5 Exceptions to Specification 16483 and addendum (one (1)) are listed below:

Section	Description	Exception
	<i>Motor Protection Relay</i>	<i>Exception: A Motor Protection relay is not part of this scope of supply, it is not shown on E5 Drawing, if required can provide as a price adder.</i>
262923-2.02.2b	<i>Power Loss Ride-through: VFD shall be capable of 5 cycle power loss ride-through without fault activation.</i>	<i>Clarification: RA drives provides a standard power ride-thru of 15milliseconds or less than 1 cycle at full load</i>
	<i>Non Scope Items</i>	<i>Clarification: Please note the details of the items provided in this proposal. RA is only proposing what is specifically stated in this proposal.</i>
	<i>Start-Up & Training</i>	<i>Clarification: Changed from 9 Days to 5 Days per Sales due to original request excessive for 2 VFDs.</i>
	<i>Spare Parts</i>	<i>Exception: These two items will not be part of this scope of supply as not available for these VFDs. 4. One spare EPROM chip for each VFD. 5. One microprocessor-based interface display and monitoring panel, and keypad. (RA providing extra HIM only)</i>

Additional Design and Application Clarifications

1. Motor FLA is required in order to properly size the drives. If FLA is not available at the time of the proposal, VFD's are sized based on HP
2. Local code is not in the scope of the VFD supplier.
3. The drives have adjustable carrier frequency of 2-10 KHz. The drive ratings are based on 4 KHz setting.
4. Rockwell Automation packaged drives are rated for Seismic Zone 4, 0-40 deg C
5. Labor, equipment, and materials required for installation are not in the scope of the VFD supplier.
6. Power and motor cable termination lugs are the responsibility of the purchaser, not Rockwell Automation.
7. Wire markers, if required by spec, are sleeve-type and applied to customer wiring points only.
8. Rockwell Automation drives have a +/- 10% voltage tolerance. See Pub 20B-UM001_-EN-P for full details.



Low Voltage VFD

Project:	Smith Pump Pfennig Pump Station Improvements Pump/Pflugerville, TX
Scope:	Spec Section 16483 - Variable frequency drive
Quote:	QMOJR0148

- 9. Power factor correction caps should not be used with Rockwell Automation drives.
- 10. Rockwell Automation standard test process and procedure are included with this proposal.
- 11. Motor design, cable lead length and type are required in order to determine if DV/DT filters are required in the design. If information is received
- 12. Rockwell Automation VFD PCB connections are not all gold plated.
- 13. Drive modules are run-in tested prior to shipment to Rockwell Automation, no additional run-in is included.
- 14. The door mounted HIM is not available with a keypad key switch
- 15. Non current carrying parts will be painted with a Rockwell Automation standard paint color.
- 16. Field testing and the equipment to perform the required field testing is not in the scope of the VFD manufacturer.
- 17. The HIM backlight and DC bus parameter can provide indication that the bus is charged.
- 18. When sizing drive/motor combinations, Rockwell Automation assumes that inverter duty motors have a service factor of 1.0 when run on VFD
- 19. Any customer supplied equipment shipped to a RA facility will be subject to a mounting and handling fee.