

AGENDA ITEM FOR ADMINISTRATIVE MEETING

( ) Discussion only  
( X ) Action

FROM (DEPT/ DIVISION): County Counsel

SUBJECT: Purchase Contract – Pumps and Motors

<p>Background: The County issued an Invitation to Bid for the purchase of pumps and motors for the Central Pipeline project. Three bids were received:          HD Fowler Company - \$1,218,472.50          Pasco Machine - \$1,848,762          Unit Process Company - \$2,736,295          After a review of the bids by the consultants and staff, the recommendation is to award the contract to Pasco Machine. The lowest bid did not include bids for all required items, so is not responsive.</p>	<p>Requested Action: Approve notice of intent to award contract for purchase of pumps and motors to Pasco Machine Company in the amount of \$1,848,762</p>
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ATTACHMENTS: Bids

Checkoffs:

- ( ) Dept. Head (copy)
- ( ) Budget (copy)
- ( ) Legal (copy)

To be notified of Meeting:

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Scheduled for meeting on: March 15, 2023

Action taken:

**BID SHEET**  
ITB-006 Pumps and Motors

Line Item	Description	Quantity	Unit of Measurement	Unit Price (USD)	Extended Price (USD)	Lead Time
1	Installation of Line Items 2 & 4 with Accompanying Motors (Temporary Pump Arrangement Only)	1	LS	No BID	No BID	Submittals: 3-4 weeks Delivery: 29 weeks After Approval
2	Fully Assembled Vertical Turbine Pump Assembly (1,400 gpm @ 515 ft)	2	EA	\$98,856.25	\$197,712.50	Submittals: 3-4 weeks Delivery: 29 weeks After Approval
3	Vertical, Solid Shaft, 250 hp, 4160V, 1,200 rpm Motor <b>1800 RPM Per RFI #4</b>	2	EA	\$37,910.00	\$75,820.00	Submittals: 3-4 weeks Delivery: 29 weeks After Approval
4	Fully Assembled Vertical Turbine Pump Assembly (5,050 gpm @ 515 ft)	2	EA	\$157,065.00	\$314,130.00	Submittals: 3-4 weeks Delivery: 29 weeks After Approval
3	Vertical, Solid Shaft, 800 hp, 4160V, 1,200 rpm Motor <b>1800 RPM Per RFI #4</b>	4	EA	\$78,045.00	\$312,180.00	Submittals: 3-4 weeks Delivery: 29 weeks After Approval
5	Disassembled and Packaged for Long Term Storage Vertical Turbine Pump Assembly (5,050 gpm @ 515 ft) (Phase 2)	2	EA	\$157,065.00	\$314,130.00	Submittals: 3-4 weeks Delivery: 29 weeks After Approval
Bid Subtotal					\$1,213,972.50	
Freight Total					\$4,500.00	
Total Bid Amount					\$1,218,472.50	

Bidder certifies this bid is valid for 60 calendar days.

Bidder HD Fowler Company  
 Address 1336 Dietrich Road Pasco, Washington 99301  
 By (Print) Tyler Tompkins  
 By (Signed) 

### **Specifications and Plans Reviewed**

- Instructions to Bidders
- General Conditions
- 13 82 00 – Irrigation Pumps
- 13 82 01 – Irrigation Pump Motors
- Plans M1002, M1003 & S2002
- RFI Response posted to <https://umatillacounty.gov/departments/bcc/notices> on 02-24-2023

No other specifications, plans or correspondence were provided or considered

### **Items Not Included**

- Anchor bolts, lubricating oil and grease referenced in 13 82 00.1.1.B
- Spare parts, as they are referenced but not listed in spec 13 82 00
- Steel pipe to be welded to existing intake pipes, as shown on plans M1002 & M1003
- Any and all appurtenances or auxiliary items downstream of the pump discharge flanges
- Delivery, field testing & any required storage
- Installation Services per 13 82 00.3.3

## Exceptions to Bid Conditions and Specifications

(As required by GENERAL CONDITIONS, #3)

### Section 13 82 00

- 1.2 – A detailed water analysis would need to be reviewed to confirm that the varying amounts of sand, silt and aquatic growth will not impact expected pump life and performance.
- 1.3.A.4 – Vibration limits in the field are dependent on the foundation being adequately rigid.
- 1.5 – Xylem's standard crating is offered for the pumps being stored given that storage will be indoors.
- 1.6.C – Operation at shut-off should be limited to very short spans of time, as centrifugal pumps are designed to operate within a specified range of their BEP. Operating outside of those ranges can cause excessive vibration, wear, overheating and fluid recirculation – all of which could negatively impact performance and longevity.
- 2.1, TABLE 16C – 1,400 GPM units will have impellers upgraded to 316 SS. Chrome plating at wear surfaces of shafting to be 405 BHN on all units.
- 2.4 – Offering a guarantee against cavitation damage is not possible, as that damage is mainly caused by the operator(s) running with the discharge valve too far closed (suction recirculation) or too far open (negative NPSH margin). Note that NPSHR at the design point of the higher flow pumps is 28', and NPSHA is above 35' (based on atmospheric pressure plus distance from the 1<sup>st</sup> stage impeller eye to min water level), so there is ample NPSH margin available.
- 2.5 – Shaft couplings on the 800 HP units are being offered as keyed. If threaded couplings are required, the engineer may have to supply written acknowledgment of the associated risks during the submittal phase. A deduct would apply if threaded couplings are used.
- 3.2.B – Performance test will be done with one section of column removed due to test stand length limitations.

### Section 13 82 01

- 2.1.B.2 – 0.125" screens would restrict air flow and clog easily. Offering screens with a 0.25" opening.
- 2.1.F.2.b.iii – The 800 HP application could utilize air/oil cooled spherical roller bearings and still exceed the requested L-10 life. Water cooled feature included, see below deduct to utilize the air/oil cooled option.
- 2.1.I.4 & 2.2.B.2.c – If the surge caps and lightning arrestors are provided on the motors, everything upstream will remain unprotected (including the VFDs). As such, US Motors (Nidec) took exception to this, and GE strongly recommended against it and offered to provide further information on why inverter duty motors should not incorporate this protection. Based on both listed motor vendors taking this stance, the motors are being offered without surge caps and lightning arrestors. If still required, see adder below.

## OPTIONAL ADDERS

### Motor witness testing

Per 13 82 01.3.2.C: Adder to upgrade to witnessed testing = **\$1,611 per unit (applies to all 6 units)**

### Motor Surge protection

Per 13 82 01.2.2.B.2.c: Upsize motor conduit boxes from 11,500 to 44,000 cubic inches, and include stress cones and lightning arrestors = **\$9,654 per unit (applies to the [4] 800 HP units)**

### Field Service

If Xylem is to witness installation or provide any inspection, installation certification, start-up, adjustments, alignment, field test reports, training or instruction for the units we supply, the customer will be charged the domestic field service rate of **\$2,947 list per day plus all expenses**

## OPTIONAL DEDUCTS

### Motor Bearing Design

Per 13 82 01.1.F.2.b.iii: An air/oil cooled spherical roller bearing will exceed the requested L-10 life. Deduct to remove the water-cooled bearing option is **\$2,441 per unit (applies to all 6 units)**

## **Warranty**

**(As required by INSTRUCTIONS TO BIDDERS, Section 8.0)**

Xylem is offering a 2 year warranty that will apply to both the pumps and motors, as required by section 13 82 00.1.3.A.4. The warranty length will remain in effect for 24 months after start-up, or 30 months after shipment; whichever occurs first.

Xylem can offer a deferred warranty if needed for the 2 pumps and motors being supplied for long term storage. This deferment would be for up to 30 months, meaning the warranty length will remain in effect for 24 months after start-up, or 60 months after shipment; whichever occurs first.

If the deferred option is desired, the adder will be 5% of the overall price of each unit being stored. In addition, there will be required action items, some of which will be the responsibility of the owner and be performed at the owner's expense. These items would be addressed in more detail during the submittal process, and would include (but not be limited to) the following:

- Periodic shaft rotation of the bowl shaft
- Megger test of the motor's winding insulation.
- Internal inspection to determine that the motor winding has not been damaged and that the motor is clean and dry.
- Inspection of the motor bearings to determine they have not been damaged and there is no water in the oil reservoirs.
- External inspection of the pump components and motors to determine that no damage has occurred.

**BID SHEET**  
ITB-006 Pumps and Motors

Line Item	Description	Quantity	Unit of Measurement	Unit Price (USD)	Extended Price (USD)	Lead Time
1	Installation of Line Items 2 & 4 with Accompanying Motors (Temporary Pump Arrangement Only)	1	LS	\$58,632.00	\$58,632.00	2 WEEKS
2	Fully Assembled Vertical Turbine Pump Assembly (1,400 gpm @ 515 ft)	2	EA	\$216,867.00	\$433,734.00	18-20 WEEKS
3	Vertical, Solid Shaft, 250 hp, 4160V, 1,200 rpm Motor	2	EA	\$51,111.00	\$102,222.00	14 WEEKS
4	Fully Assembled Vertical Turbine Pump Assembly (5,050 gpm @ 515 ft)	2	EA	\$275,402.00	\$550,804.00	18-20 WEEKS
3	Vertical, Solid Shaft, 800 hp, 4160V, 1,200 rpm Motor	4	EA	\$102,697.00	\$410,788.00	30 WEEKS
5	Disassembled and Packaged for Long Term Storage Vertical Turbine Pump Assembly (5,050 gpm @ 515 ft) (Phase 2)	2	EA	\$138,356.00	\$276,712.00	18-20 WEEKS
				<b>Bid Subtotal</b>	\$1,832,892.00	
				<b>Freight Total</b>	\$15,870.00	
				<b>Total Bid Amount</b>	\$1,848,762.00	

Bidder certifies this bid is valid for 60 calendar days.

X  (Check if applicable) Bidder will comply with the provisions of ORS 279C.800 -.870, including the payment of the applicable prevailing rate of wage.

Bidder PASCO MACHINE COMPANY

Address 518 W COLUMBIA ST

By (Print) Caleb Curfman

By (Signed) 



518 W COULMBIA ST - PASCO, WA 99301,  
 PH: 509-547-2448 / FX: 509-547-7334

**EXCEPTIONS TO BID CONDITIONS AND SPECIFICATIONS**

ITB-006

**INSTRUCTIONS TO BIDDERS**

7.0	EXCEPTION, PROGRESS PAYMENT SCHEDULE FOR THE EQUIPMENT WILL BE AS FOLLOWS. PUMPS, MOTORS, AND FREIGHT <ul style="list-style-type: none"> <li>• 50% AT TIME OF ORDER</li> <li>• 25% AT TIME OF SHIPPMENT</li> <li>• 25% AT COMPLETION OF PROJECT</li> </ul> INSTALLATION <ul style="list-style-type: none"> <li>• 100% AT COMPLETION OF PROJECT</li> </ul>
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**SECTION 13.82.00 - IRRIGATION PUMPS**

1.3.A.3	CLARIFICATION, SIMFLO WILL PROVIDE SIMFLO STANDARD O&M MANUAL.																																																
1.3.A.4	EXCEPTION/CLARIFICATION TO WARRANTY. SIMFLO WILL PROVIDE SIMFLO STANDARD EXTENDED WARRANTY FOR A PERIOD OF 24 MONTHS FROM INSTALL OR 30 MONTHS FROM SHIP DATE, WHICHEVER COMES FIRST. PLEASE SEE BELOW CLARIFICATION PAGE FOR SIMFLO STANDARD WARRANTY DESCRIPTION. EXCEPTION TO ENTIRETY OF VIBRATION ISSUE.																																																
1.6.B TABLE 16B	CLARIFICATION, MOTOR SIZE IN TABLE IS 1000HP. 250HP IS QUOTED																																																
2.4	EXCEPTION, PROVIDING SUCCESSFUL AND APPROVED TESTING IN LAB BASED ON SPECIFIED OPERATING CONDITIONS, PASCO MACHINE TAKES EXCEPTION TO ENTIRETY OF CAVITATION ISSUE.																																																
2.5	CLARIFICATION, SIMFLO WILL PROVIDE MALE THREAD SHAFT WITH FEMALE THREADED COUPLINGS.																																																
2.3, 2.4, 2.5	CLARIFICATION/EXCEPTIONS, PARTS AND MATERIALS ARE PER BID SPECIFICATIONS. IF IT IS DESIREABLE TO REMOVE THE WEAR ITEMS, DEDUCTS ARE LISTED BELOW. <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>LINE</th> <th>UNIT</th> <th>DESCRIPTION</th> <th>QTY</th> <th>EA</th> <th>EXT</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>TEMP PUMP ASSY</td> <td>REMOVE BOWL AND IMPELLER WEAR RINGS</td> <td>2</td> <td>(\$13,312)</td> <td>(\$26,624)</td> </tr> <tr> <td>2</td> <td>TEMP PUMP ASSY</td> <td>REMOVE CHROME PLATED SHAFT FOR 416SS</td> <td>2</td> <td>(\$8,529)</td> <td>(\$17,059)</td> </tr> <tr> <td>4</td> <td>PERM PUMP ASSY</td> <td>REMOVE BOWL AND IMPELLER WEAR RINGS</td> <td>2</td> <td>(\$14,293)</td> <td>(\$28,586)</td> </tr> <tr> <td>4</td> <td>PERM PUMP ASSY</td> <td>REMOVE CHROME PLATED SHAFT FOR 416SS</td> <td>2</td> <td>(\$11,900)</td> <td>(\$23,800)</td> </tr> <tr> <td>6</td> <td>PERM BOWL ASSY</td> <td>REMOVE BOWL AND IMPELLER WEAR RINGS</td> <td>2</td> <td>(\$14,293)</td> <td>(\$28,586)</td> </tr> <tr> <td>6</td> <td>PERM BOWL ASSY</td> <td>REMOVE CHROME PLATED SHAFT FOR 416SS</td> <td>2</td> <td>(\$5718)</td> <td>(\$11,435)</td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>SUBTOTAL DEDUCT</b></td> <td><b>(\$136,089)</b></td> </tr> </tbody> </table>	LINE	UNIT	DESCRIPTION	QTY	EA	EXT	2	TEMP PUMP ASSY	REMOVE BOWL AND IMPELLER WEAR RINGS	2	(\$13,312)	(\$26,624)	2	TEMP PUMP ASSY	REMOVE CHROME PLATED SHAFT FOR 416SS	2	(\$8,529)	(\$17,059)	4	PERM PUMP ASSY	REMOVE BOWL AND IMPELLER WEAR RINGS	2	(\$14,293)	(\$28,586)	4	PERM PUMP ASSY	REMOVE CHROME PLATED SHAFT FOR 416SS	2	(\$11,900)	(\$23,800)	6	PERM BOWL ASSY	REMOVE BOWL AND IMPELLER WEAR RINGS	2	(\$14,293)	(\$28,586)	6	PERM BOWL ASSY	REMOVE CHROME PLATED SHAFT FOR 416SS	2	(\$5718)	(\$11,435)	<b>SUBTOTAL DEDUCT</b>					<b>(\$136,089)</b>
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3.3.A	EXCEPTION, ENGINEER FROM THE PUMP MANUFACTURE WILL NOT BE PRESENT DURING THE INSTALLATION. THE ENGINEER WILL BE PRESENT 2 DAYS ONLY FOR INSTALLATION INSPECTION AND START UP TESTING. IF THE ENGINEER FROM THE PUMPING MANUFACTURE IS REQUIRED																																																



	TO BE ON SITE TO SUPERVISE THE ENTIRETY OF THE INSTALLATION IT IS AT A RATE OF \$2,550 PER DAY.
3.3.B	CLARIFICATION, THE ABILITY TO LEVEL TO THE SPECIFICATIONS WILL BE LIMITED BY THE STRAIGHTNESS OF THE PIPE THE PUMP WILL SET IN AND THE LEVEL OF THE SOLE PLATE. THE PUMP MUST BE SET IN THE PIPE AND USED AS A REFERENCE FOR THE MATING PIPING FLANGE TO THE DISCHARGE, THEN REMOVED TO FINISH WELDING THE FLANGE TO THE PIPE. IF FLANGE IS WELDED ON WITHOUT REFERENCE TO IN PLACE PUMP DISCHARGE, PASCO MACHINE TAKES EXEMPTION TO SPECIFIED TOLERANCE.
3.3.C	EXCEPTION, TESTING CONTROL, MONITORING, AND PROTECTIVE CIRCUITS RESPONSIBILITY OF OTHERS

**SECTION 13.82.01 - IRRIGATION PUMP MOTORS**

1.4.A.4	EXCEPTION, DATA PACK WILL INCLUDE GARANTEED EFFICIENCY AT FULL LOAD. EFFICIENCY VALUES AT ALL OTHER LOADS WILL BE NOMINAL. ALL POWER FACTOR VALUE WILL BE NOMINAL
1.4.B.2	EXCEPTION, RECOMMENDED PRICED SPARE PARTS LIST NOT IN MANUFACTURER'S SCOPE
2.1.C	EXCEPTION, DRAIN OPENING AND PLUGS ARE NOT PROVIDED FOR OPEN TYPE ENCLOSURE
2.1.G	EXCEPTION, NOISE WILL BE MEASURED AS PER ISO 9614-2 (POINT METHOD)
2.1.I.1	CLARIFICATION, QUOTING MOTOR WITH 5700 IN^3 BOX WITH FRONT COVER. DAIGONALLY SPLIT BOX CANNOT BE OFFERED
2.1.I.4	EXCEPTION, MOTOR MAIN TERMINAL BOX IS SUITABLE FOR STRESS CONE. HOWEVER, BOX IS NOT LARGE ENOUGH FOR MOUNTING OF SURGE PROTECTION DEVICE OR CURRENT TRANSFORMERS
2.2.B.C	EXCEPTION, AS PER 2.1.A.2 QUOTED MOTORS ARE VFD RATED. SURGE PROTECTION DEVICE ON VFD RATED MOTOR NOT OFFERED
3.2.A	EXEPTION, EFFICIENCY WILL BE MEASURED PER IEEE 112 METHOD E1/F1
3.2.C	EXECEPTION, NON-WITNESS TEST ONLY QUOTED. WITNESSED TESTING MAY REQUIRE AN ADDITIONAL LEAD TIME WITH APPLICABLE FEES AND WILL BE AT THE SCHEDULE OF THE MANUFACTURE

FROM MOTOR MFG

*EIM Comments :*

*1. Quoted MV motor is suitable for variable torque load at 1.00SF for speed range 275 to 1200 RPM with multi-level type inverters with current THD≤3% along with dv/dt filters/ isolation Transformer etc to reduce insulation stress. MV Multi-level inverter generally produces less voltage spikes, therefore, compliance to NEMA MG-1, Part 31 is not quoted. However, advise for re-quotation if required.*

*2. Neutral Grounding: The motor Insulation System is designed for a Power System with a Grounded Neutral.*

**BID SHEET**  
ITB-006 Pumps and Motors

Line Item	Description	Quantity	Unit of Measurement	Unit Price (USD)	Extended Price (USD)	Lead Time
1	Installation of Line Items 2 & 4 with Accompanying Motors (Temporary Pump Arrangement Only)	1	LS	\$75,000	\$75,000	
2	Fully Assembled Vertical Turbine Pump Assembly (1,400 gpm @ 515 ft)	2	EA			
3	Vertical, Solid Shaft, 250 hp, 4160V, 1,200 rpm Motor	2	EA	\$321,151.75	\$642,303.50	39 weeks
4	Fully Assembled Vertical Turbine Pump Assembly (5,050 gpm @ 515 ft)	2	EA			
3	Vertical, Solid Shaft, 800 hp, 4160V, 1,200 rpm Motor	4	EA	\$484,491.50	\$1,937,966	39 weeks
5	Disassembled and Packaged for Long Term Storage Vertical Turbine Pump Assembly (5,050 gpm @ 515 ft) (Phase 2)	2	EA			
				<b>Bid Subtotal</b>		
				<b>Freight Total</b>	<b>\$24,243</b>	
				<b>Total Bid Amount</b>		

Bidder certifies this bid is valid for 30 calendar days.

Documents: \$1,854

2 year warrantee: \$15,120.50 Temporary pumps

2 year warrantee: \$39,808.00 Primary pumps

Bidder: Unit Process Company

Address: 834 80th St. SW Suite 300, Everett, WA 98203

By (Print) Craig Janett

By (Signed) 

**Total bid: \$2,736,295 tax not included**



**Unit Process Company**

**Quote QQ-2445726-01**

Date 3/2/2023

**Company**  
 Name Umatilla County - Pendelton  
 Board of Commissioners Board of Commissioners  
 Email ordnanceproject@umatillacounty.gov

**Sales Rep**  
 Email Craig Janett  
 cjanett@unitprocess.com  
 Phone 509-750-0921

**Prepared By**  
 Email John McKelvie  
 jmckelvie@unitprocess.com  
 Phone +1 425 438 8726,2386

**Quote Ref** Ordnance Project - Pumps and Motors ITB-006

Line No	Product Details	Qty	Unit Price	Line Total	Delivery
1	<p><b>Part Number NATIONALPUMP:C-174739</b>            C-174739 - TABLE 16A. PUMPS 1 THROUGH 4            TABLE 16A. DESIGN K20HC-11 STAGE PUMP            COS: 5050 US GPM @ 516 FT</p> <p>BOWL ASSEMBLY            MODEL: K20HC-11 STAGE            SHAFT: 17-4 PH SHAFT WITH CHROME OXIDE IN BEARING            LOCATIONS            SHAFT DIA.: 2.44            STICK-UP: 16            FIT: 14 FLG X 2.44            BOWL: CI LINED &amp; DI LINED            BOWL BEARING: BRONZE            BOWL WEAR RING: 416 SS            O-RING: BUNA            IMPELLER: NI AL BRONZE C958            IMP. TYPE: ENCLOSED            COLLETS: STEEL            BALANCE: DYNAMIC            IMP. WEAR RING: AL BRONZE            SUCTION: CAST IRON            SUC. BEARING: BRONZE            SAND COLLAR: BRONZE            STRAINER: VORTEX STRAINER            HARDWARE: STEEL            COATING: STANDARD</p> <p>COLUMN ASSEMBLY            COL. DIA.: 14 (0.375 WALL)            TPL: 26.5            CONNECTION: FLG            LINESHAFT TYPE: OPEN            SHAFT DIA.: 2.438            COLUMN: STEEL            SHAFT: 17-4 WITH CHROME OXIDE IN BEARING LOCATIONS            BEARING RETAINERS: BRONZE            BEARINGS: BRONZE            SHAFT COUPLINGS: 316 SS THREAED            COLUMN COATING: STANDARD OD</p> <p>DISCHARGE HEAD ASSEMBLY            DISCHARGE HEAD MODEL: NF            DISCHARGE SIZE: 18-300 #            MATERIAL: STEEL            COATING: STANDARD OD            HOUSING: MECHANICAL SEAL HOUSING</p>	4	\$484,491.50	\$1,937,966.00	

	<p>SEAL: JOHN CRANE 5610          BEARING: BRONZE          HEAD SHAFT: 17-4 PH WITH CHROME OXIDE IN BEARING LOCATION          COUPLING: AFS          FASTENERS: STEEL          SOLE PLATE: STEEL</p> <p>DRIVER          MANUFACTURER: GE          TYPE: VSS          ENCLOSURE: WP1          POWER RATING: 900HP          SPEED: 1200RPM          SERVICE FACTOR: 1.15          PHASE ~ FREQUENCY ~ VOLTAGE: 3~60~4160          FRAME: 5813VP          BASE DIAMETER (BD): 30.5          COUPLING: NRR</p> <p>TESTING          HYDROSTATIC:          ___ HEAD: BY FABRICATOR          ___ BOWLS: NON-WITNESSED          PERFORMANCE: NON-WITNESSED          ___ SET UP: BOWL ASSEMBLY WITH SHOP MOTOR AT A REDUCED SPEED          ___ ACCEPTANCE GRADE: 1U AT 82%          ___ APPROVAL REQUIRED: YES          STRUCTURAL AND ROTODYNAMIC ANALYSIS          ___ LATERAL LEVEL I          ___ TORSIONAL LEVEL II          ___ STRUCTURAL LEVEL II</p>				
2	<p><b>Part Number NATIONALPUMP:C-175994</b>          C-175994 - TABLE 16B. TEMPORARY PUMPS          TEMPORARY PUMPS 1 &amp; 2 M14XXHC-13 STAGE          COS: 1,400 GPM AT 515 FT. TDH</p> <p>BOWL ASSEMBLY          MODEL: M14XXHC-13 STAGE          SHAFT: 416 SS SHAFT WITH CHROME OXIDE IN BEARING LOCATIONS          SHAFT DIA.: 1.94          STICK-UP: 16          FIT: 14 FLG X 1.94          BOWL: CI LINED &amp; DI LINED          BOWL BEARING: BRONZE          BOWL WEAR RING: 416 SS          O-RING: BUNA          IMPELLER: AL BRONZE C955          IMP. TYPE: ENCLOSED          COLLETS: 316 SS          BALANCE: DYNAMIC          IMP. WEAR RING: AL BRONZE          SUCTION: CAST IRON BELL          SUC. BEARING: BRONZE          SAND COLLAR: BRONZE          STRAINER: VORTEX STRAINER          HARDWARE: SS</p>	2	\$321,151.75	\$642,303.50	

	<p>COATING: STANDARD</p> <p>COLUMN ASSEMBLY COL. DIA.: 14 (0.375 WALL) TPL: 26.5 FT CONNECTION: FLG LINESHAFT TYPE: OPEN SHAFT DIA.: 2.44 COLUMN: STEEL SHAFT: 17-4 PH WITH CHROME OXIDE IN BEARING LOCATIONS BEARING RETAINERS: BRONZE BEARINGS: BRONZE SHAFT COUPLINGS: 316 SS THREADED COLUMN COATING: STANDARD OD</p> <p>DISCHARGE HEAD ASSEMBLY DISCHARGE HEAD MODEL: NF DISCHARGE SIZE: 18-300 # MATERIAL: STEEL COATING: STANDARD OD HOUSING: MECHANICAL SEAL HOUSING SEAL: JOHN CRANE 5610 BEARING: BRONZE HEAD SHAFT: 17-4 PH WITH CHROME OXIDE IN BEARING LOCATION COUPLING: AFS FASTENERS: STEEL SOLE PLATE: STEEL</p> <p>DRIVER MANUFACTURER: GE TYPE: VSS ENCLOSURE: WP1 POWER RATING: 300HP SPEED: 1200RPM SERVICE FACTOR: 1.15 PHASE ~ FREQUENCY ~ VOLTAGE: 3~60~4160 FRAME: 5008 BASE DIAMETER (BD): 24.5 COUPLING: NRR</p> <p>TESTING HYDROSTATIC: __HEAD: BY FABRICATOR __BOWLS: NON-WITNESSED PERFORMANCE: NON-WITNESSED __SET UP: SHOP MOTOR __ACCEPTANCE GRADE: 1U __APPROVAL REQUIRED: YES</p>				
3	<p><b>Part Number NATIONALPUMP:SUBMITTAL</b> SUBMITTAL APPROVAL REQ LEVEL 1</p>	1	\$1,854.00	\$1,854.00	
4	<p><b>Part Number NATIONALPUMP:FREIGHT</b> FREIGHT: NPC AZ TO UMATILLA COUNTY OR</p>	1	\$24,243.00	\$24,243.00	
5	<p><b>Part Number NATIONALPUMP:WARRANTY-PERMANENT PUMPS</b> 2 YEAR WARRANTY FOR PERMANENT PUMPS</p>	4	\$9,952.00	\$39,808.00	



**General Description of the AC Motor: MV23011701-1**

Output = 900 HP	Phase = 3	NEMA Design = NA	Product Name= MV 580 WP Vertical
Synch RPM = 1200	Frequency = 60	DE E/S & Mtg= P - Base & Round Frame	GE Type = Premium Efficiency - NEMA Standard Torque, KS
Voltage = 4160	Shaft Orientation = Vert., Shaft Down, With a P-Base	C-face Dia.(AK) = NA	Ambient Temp. = 40C/-20C
Enclosure = WPI	Hazardous Loc.= Non-Hazardous	Frame Material = Cast Iron	Insulation Class = F
IP & IC Code = IP23,IC01	Class and Group = NA	Estimated Frame= 5813	Service Factor = 1.15
Load Type =NA	Var. Freq. Speed Range=NA	DE Shaft Extension =VP	Load Connection= Direct
Vert. Thrust Type = High	Vert. Shaft Type = Solid	P Base Dia(BD)=Vert. Customer to furnish during order	Vert. Coupling Type = Non-Reverse
Down Thrust = 17425 Lb	Up Thrust = 30% Momentary	Bearing Life (L10m) = 100000 hours	Coupling Size = NA
Motor Application: Non-Nuclear	Warranty = 1 Years	Bearing = 29334 and Oil lube	Weight=12650 lb

**Motor Adders :**

100 Ohm bearing RTD, 1 per bearing  
Winding RTDs- 6 100-ohm Platinum, 2 per phase  
120V Volts Standard Space heater  
Accessory box for RTD and BTD leads  
Space Heater box  
Insulated Upper bearing carrier  
Non-witnessed complete test

**Software & Miscellaneous(Net Price Only)**

Routine test  
Data Pack

Test & Report  
1

**GEIM Comments :**

1. Quoting motor only as per description. No specification is furnished for review.
2. Rotation with a Non-Reverse Coupling is CCW viewed from the top of the motor. Caution: Motors with Non-Reversed Couplings must be operated at or above 275 RPM.
3. Neutral Grounding: The motor Insulation System is designed for a Power System with a Grounded Neutral.

**Comments to 13 82 01, pages 1-6**

2.1, B, 2: GE is offering screens with a 0.25" opening size.

2.1, F, 2, b, iii: An air/oil cooled spherical roller bearing has been offered as the base bid on the 800hp motor exceeding the requested L-10 life. Adder to upgrade to a water-cooled larger bearing = \$2,740.00 each 800hp motor.

2.1, I, 4: Motor offered with an oversized main conduit sized for stress cones only. Surge caps and lightning arrestors are not typically used on VFD motors, and have not been offered – Please confirm compatibility with VFD supplier. Adder to supply a 44,000cu-in box sized for stress cones and lightning arrestors = \$4,869.00 ea. motor. Adder for surge caps and lightning arrestors mounted in the oversized box = \$5,921.00

2.2, B, 2, c: See comment for 2.1, I, 4: Please consult VFD supplier. Adder to supply a 44,000cu-in box sized for stress cones and lightning arrestors = \$4,869.00 ea. motor. Adder for surge caps and lightning arrestors mounted in the oversized box = \$5,921.00 ea. motor.

3.2, C: Non-witnessed testing has been offered. Adder for witnessed testing = \$1727.00 each motor.

This quote is "Print for Approval". Which means, up on receiving the order , engineering data (Prints) will be sent for approval. The order will be released for production only when the prints approved. The lead time mentioned in the quote is applicable from the time customer approves the prints.

## Insulated Bearing Systems:

INSULATED UPPER BEARING CARRIER WITH AEGIS GROUND RING      Insulated Upper Bearing Carrier With Aegis Ground Ring

LRA TO BE 75% OR LESS

## Software & Miscellaneous

Complete test	Test & Report
Routine test	Test & Report

### Technical Information:

Data for Approval	1 Standard
Torque & Current .Vs. Speed Curve(DA)	1
Efficiency & Power Factor .Vs. Load Curve(DA)	1
Thermal Limit Curve(DA)	1
Data Pack	1

**Total Lead Time : 98 Calendar Days (as of 01-Mar-2023)**  
(Lead Time Includes 7 Days for Documentation)

### GE Comments :

Comments to 13 82 01, pages 1-6

2.1, B, 2: GE is offering screens with a 0.25" opening size.

2.1, F, 2, b, iii: An air/oil cooled spherical roller bearing has been offered as the base bid on the 800hp motor exceeding the requested L-10 life. Adder to upgrade to a water-cooled larger bearing = \$2,740.00 each 800hp motor.

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2.2, B, 2, c: See comment for 2.1, I, 4: Please consult VFD supplier. Adder to supply a 44,000cu-in box sized for stress cones and lightning arrestors = \$4,869.00 ea. motor. Adder for surge caps and lightning arrestors mounted in the oversized box = \$5,921.00 ea. motor.

3.2, C: Non-witnessed testing has been offered. Adder for witnessed testing = \$1727.00 each motor.

End destination country is UNITED STATES(UL Component Recognition, US DoE Registration).

Neutral Grounding: The motor Insulation System is designed for a Power System with a Grounded Neutral.

If used with a VFD,GE recommends bearing insulation & shaft grounding ring to mitigate shaft currents for quoted motor.However,the presence of harmful levels of shaft voltage and bearing currents are heavily dependent on the specific application and installation,we as a motor manufacturer do not automatically include bearing insulation and/or shaft grounding devices on motors designed for general purpose inverter usage.It is up to the customer to determine for their specific application.Please advise for re-quote if these features are required.

Rotation with a Non-Reverse Coupling is CCW viewed from the top of the motor. Caution: Motors with Non-Reversed Couplings must be operated at or above 600 RPM. If operating speeds are required below 600 RPM, AND motor stop time is greater than 2 seconds, the ratchet springs can be removed from the NRR coupling to allow operation down to 360 RPM. If the stop time is less than 2 seconds, the springs should not be removed.

### Routine test-

Every General Electric motor is tested for the parameters listed below. The routine test consists of:

- Measurement of winding resistance.
- Measurement of no-load current and speed at rated voltage
- Measurement of no-load radial and axial vibration at rated voltage with the motor mounted on elastic pads.
- High-potential test per NEMA MG1, Part 3.

Note: On motors rated at other than 60 Hz, measurements may be taken at 60 Hz.

All Test measurements will be taken at 60 Hz.

Complete test-

A complete test consists of the following items:

- a. High-potential testing
  - b. Winding temperature rise by resistance at rated load under dynamometer loading
  - c. Speed at 100, 75, 50, and 25% of rated load
  - d. Efficiency at 100, 75, 50, and 25% of rated load
  - e. Power factor at 100, 75, 50 and 25% of rated load
  - f. Input current at 100, 75, 50 and 25% of rated load
  - g. Input power at 100, 75, 50 and 25% of rated load
  - h. Locked-rotor current (at rated voltage or by calculation from a test at reduced voltage)
  - i. Locked-rotor torque (at rated voltage or by calculation from a test at reduced voltage)
  - j. Breakdown torque (at rated voltage or by calculation from a test at reduced voltage)
- Non standard components like Insulated bearing, brake,tach, BTD, Switch, terminals ask plant for lead time

**Web site: [www.gemotorswolong.com](http://www.gemotorswolong.com)**

**Conditions of Sale:**

GE Industrial Motors Standard Terms & Conditions of Sale ES104 apply and can be found at Web site: [www.gemotorswolong.com/terms](http://www.gemotorswolong.com/terms)

Please refer to GE Motors & Controls Conditions of Sale (ES104, (Rev.4) (1/1/2011)).

The quotation is valid for 30 days after the Created Date or if displayed above, 30 days after the Modified Date.

Quoted materials are not intended for use in connection with any nuclear facility.

Trade Terms for Delivery, Title Transfer, and Risk of Loss:

North America (Mexico): FCA - Seller facility or warehouse (Incoterms 2010).

Transportation charges are not included. This product is quoted freight collect. Customer is responsible for freight.

To the extent the Buy American Act, Trade Agreements Act, or other domestic preference requirements are applicable to this Contract, the country of origin of Products is UNKNOWN.

The customer (distributor or direct-served customer, as applicable) warrants that there are no governmental contracting requirements or regulations that apply to this transaction (including without limitation any Federal Acquisition Regulations), other than such terms as have been disclosed to Seller and agreed to by Seller in writing prior to Seller agreeing to this transaction.

Please note : Storage Fees: As per GEIM Standard Terms and Conditions. Ordered goods produced by GEIM in compliance with Purchase Order requirements which cannot be shipped solely due to customer missing information, such as but not limited to carrier arrangements, will be charged 10% of the P. O. value 5 business days after GEIM customer notification.

Production lead times listed below are only estimated at time of quote. Actual manufacturing lead time may vary depending upon holiday time of the year and production schedules. Once motors are released for production, lead times will be provided for all motors with the order. If orders are released for production at time of order entry, scheduled dates will be provided at that time.

For more information, contact your GE account specialist.

Thank you for giving GE the opportunity to quote this motor.

**NOTE:**

Orders placed are subject to cancellations charges.

There will be a cancellation fee of \$500 incurred for any print approval order cancelled after motor data is received by customer.

If this is ordered as a print approval, all announced future price increases will be applied until this is released to manufacturing.





Unit Process Company

Quote QQ-2445773-00
Date 3/2/2023

Company Name: Umatilla County - Pendelton Board of Commissioners
Email: ordnanceproject@umatillacounty.gov

Sales Rep: Craig Janett
Email: cjanett@unitprocess.com
Phone: 509-750-0921

Prepared By: John McKelvie
Email: jmckelvie@unitprocess.com
Phone: +1 425 438 8726,2386

Quote Ref: Ordnance Project - Pump Installation

Table with 6 columns: Line No, Product Details, Qty, Unit Price, Line Total, Delivery. Row 1: 1, Part Number UPCO:INSTALLATION INSTALL TABLE 16A AND 16B VERTICAL TURBINE PUMPS, 1, \$75,000.00, \$75,000.00. Summary row: Total Price: ( USD ) \$75,000.00

Terms: Installation & startup:
1. Spec exception to 1.5 Storage is not included in this quotation.
2. No information was given to base lifting requirements for pump installation.
3. Installation is based on setting pumps on existing sole plate.
4. Site access is assumed to be open and not require special requirements or wait times.
5. Sole-plate is included in the quotation.
6. All bolting required to install the pumps on the sole plates will be provided.
7. For this proposal, Purswell Pump - Hermiston, OR was used as the installation contractor.
8. Installation timing is listed as November 15th, 2023.
9. Installation cost is based on 4 total pumps installed at one time, and startup to happen at the same time.
Terms Notes: Please reference Quotation # on any resulting purchase order and submit to: sales@unitprocess.com

All Prices are quoted ExWorks (EXW) Shipping Point.
Unless specified, Prices do not include freight, which is offered as Pre-paid and Add (PP&A).
All deliveries subject to terms of confirmed order.
Buyer is solely responsible for knowing its application requirements and specifications and the suitability of the products therefor.
Please contact productspecs@bray.com with any questions.
Seller's acceptance of this Order is expressly limited to, and expressly conditional on, Buyer's Acceptance of Seller's standard terms and conditions attached and available at https://www.bray.com/sales-terms-and-conditions.
Customer to verify that our quotation meets the technical and commercial requirements of the inquiry

and service applications.

Seller's acceptance of this Order is expressly limited to, and expressly conditional on, Buyer's Acceptance of Seller's standard terms and conditions attached and available at <https://www.bray.com/sales-terms-and-conditions>. Seller objects to any different or additional terms.