

LEGAL ADVERTISEMENT

INVITATION TO BID

FLORIDA GOVERNMENTAL UTILITY AUTHORITY

ISSUE DATE: October 21, 2015

DUE DATE: November 4, 2014 at 4:00pm Local Time

Project Name: FGUA Pasco Systems Lift Station Pump & Motor Purchase

General Description: The FGUA is requesting bids for variously sized lift station pumps & motors

Sealed proposals for the FGUA Pasco Systems Lift Station Pump & Motor Purchase addressed to the Florida Governmental Utility Authority at 280 Wekiva Springs Road, Suite 2070, Longwood, FL 32779-6026 will be received until 4:00pm Local Time, on the 4th day of November, 2015 at which time all proposals will be publicly opened and read aloud. Any bids received after the time and date specified will not be accepted and shall be returned unopened to the Bidder.

Sealed envelopes containing bids shall be marked or endorsed "Proposal for Florida Governmental Utility Authority, Bid No. FGUA Pasco Systems Lift Station Pump & Motor Purchase and Bid Date November 4, 2015. No bid shall be considered unless it is made on the Bid Form which is included in the Bidding Documents.

FGUA reserves the right to award the purchase for each individual pump & motor to one or more vendors. FGUA Bidding Documents may be examined in the office of:

Florida Governmental Utility Authority Operations Office, 280 Wekiva Springs Road, Suite 2070, Longwood, Fl 32779-6026, Telephone (407) 629-6900

Prospective bidders may obtain the Bidding Documents free of charge, in downloadable PDF file format, from the FGUA website at <http://fgua.com/docs/bids/10-21-15%20Package.pdf>. Bid documents will be made available by the close of business on Tuesday, October 21, 2015.

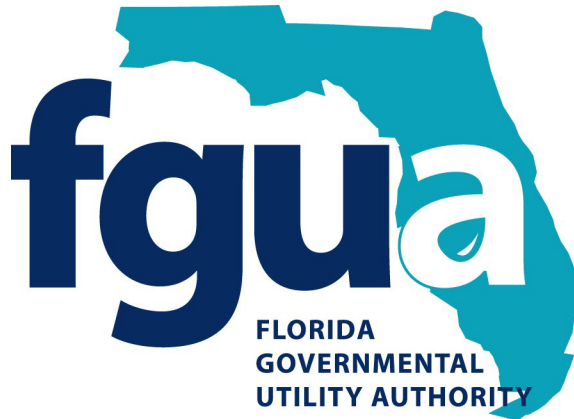
Before a purchase order will be awarded for the purchase contemplated herein, the FGUA may conduct such investigations as it deems necessary to determine the performance record and ability of the apparent low Bidder to perform the size and type of work specified in the Bidding Documents. Upon request, the Bidder shall submit such information as deemed necessary by the FGUA to evaluate the Bidder's qualifications.

The FGUA reserves the right to reject all Bids or any Bid not conforming to the intent and purpose of the Bidding Documents, and to postpone the award of the purchase for a period of time which, however, shall not extend beyond 90 days from the bid opening date.

Dated this 21th day of October 2015

FLORIDA GOVERNMENTAL UTILITY AUTHORITY

BY: Robert Dickson, P.E.
Capital Program Manager



Bid Documents

Project Name: FGUA Pasco Systems Lift Station
Pump & Motor Purchase

Due Date & Time: November 4, 2015 @ 4:00 pm

Bids must be: Mailed or hand delivered in sealed envelopes, marked or endorsed "Proposal for Florida Governmental Utility Authority, Bid No. FGUA Pasco Systems Lift Station Pump & Motor Purchase and Bid Date November 4, 2015, addressed to:

Florida Governmental Utility Authority
280 Wekiva Springs Road, Suite 2070
Longwood, Florida 32779
(407) 629-6900

INSTRUCTIONS TO BIDDERS

1. General Information

- The Florida Governmental Utility Authority is soliciting bids for variously sized lift station pumps & motors for use in its Pasco Utility Systems. The total quoted price for each pump & motor shall be inclusive of all items, shipping to 2341 Chatlin Rd. Holiday, FL, and warranty. Bid pricing shall **NOT** include sales tax. This Bid is for the pumps and motors only and is **NOT** for installation.
- FGUA follows Pasco County's Standard for Design and Construction of Water, Wastewater and Reclaimed Water Facilities 2006 Edition and as such proposed pumps & motors shall be manufactured by one of the following companies or approved equal:
 1. Flygt
 2. A.B.S.
 3. Myers
 4. Hydromatic
 5. EBARA

Approval must be obtained in writing before submission of bid for a pump manufacturer not listed above. FGUA is replacing existing pumps and as such all proposed replacement pumps must match existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

- The bid must be signed and submitted on the standard bid form herein furnished by the FGUA.
- Bidder must attach pump performance curves and specifications for the proposed replacement pumps to the bid form.
- Bidder must attach the Bidders Acknowledgement Form with submission of Bid.
- The bid must be received by the FGUA no later than **November 4, 2015** at **4:00 pm** local time in the offices of the FGUA in Longwood, Florida.

Bids must be:

- Mailed or hand delivered in sealed envelopes, marked or endorsed "Proposal for Florida Governmental Utility Authority, Bid No. FGUA Pasco Systems Lift Station Pump & Motor Purchase and Bid Date November 4, 2015, addressed to:

Florida Governmental Utility Authority
280 Wekiva Springs Road, Suite 2070
Longwood, Florida 32779
(407) 629-6900

- Regardless of the method of delivery, each bidder shall be responsible for his bid being delivered on time as the FGUA assumes no responsibility for same.
- Bids received after the time specified will not be considered.

2. Right to Reject Proposals

- FGUA reserves the right to reject any and all Bids or to waive informalities and negotiate with the apparent lowest, qualified Bidder. Further, FGUA reserves the right to withdraw this solicitation at anytime prior to final award of the contract. FGUA is not liable for any costs incurred by Bidder prior to issuance of the executed purchase order.
- FGUA reserves the right to formally amend and/or clarify the requirements of the Bid Specifications where it deems necessary. Any such addendum/clarification shall be in writing and shall be distributed to all parties who received the original bid specification and are eligible for consideration prior to the deadline for submission of proposals. Only one Bid from any individual, firm, partnership or corporation, under the same name or different names, shall be considered. Should it appear to FGUA that a Bidder has interest in more than one Bid for the Work, all Bids of such Bidder shall be rejected.

3. Signing of Bids

- Bids must be signed by an authorized agent of the Company, Corporation, LLC, etc...

4. Procurement Questions

- Procurement and Technical questions must be directed to Pradeep Sethi, Central Region Manager via telephone at 352-633-9723 or via email at psethi@govmserv.com and cc ccouch@govmserv.com
- No interpretation of the meaning of the plans, specifications or other documents shall be made orally. Any such oral or other interpretations or clarifications shall be without legal affect. All requests for interpretations or clarifications shall be in writing, addressed to the FGUA, to be given consideration. All such requests for interpretations or clarification must be received at least three (3) working days prior to the opening date. Any and all such interpretations and supplemental instructions shall be in the form of written addendum which, if issued, shall be sent to all known Bidders at their respective addresses furnished for such purpose. Such written addenda shall be binding on Bidder and shall become a part of the Contract Documents as said term is defined in the Construction Agreement.
- It shall be the responsibility of each Bidder to ascertain, prior to submitting his Bid that he has received all addenda issued and he shall acknowledge same in his Bid.

5. Award of Purchase and Right to Protest

Award of the purchase shall be made to the lowest, responsive and responsible Bidder determined on the basis of the entire Bid (Total Price) and the FGUA's investigations of the Bidder, however if it is financially advantageous for the FGUA to award the purchase of each pump individually FGUA reserves the right to do so at the total amount quoted for each individual pump. When the purchase is awarded by FGUA, such award shall be evidenced by a written document "Purchase Order," signed by the authorized representative of FGUA and delivered to the intended awardee by certified mail or other express delivery service.

Award of Purchase will be made by the FGUA Board of Directors. Award recommendations will be posted outside the offices of the Government Services Group, Inc. at its Longwood address. Any Bidder who desires to formally protest the recommended purchase award must file a notice of intent to protest with the FGUA's Chief Financial Officer within seventy two (72) hours (excluding weekends and holidays) of the date that the recommended award is posted. Upon filing of said notice of intent, the protesting party will have seven (7) days from the date of posting to file a formal protest and will be given instructions as to the form and content requirements of the formal protest. A copy of the "protest policy" is available at the offices of the FGUA's Chief Financial Officer.

6. Sales Tax

The Florida Governmental Utility Authority, as a legal entity and public body created by interlocal agreement pursuant the section 163.01 (7), Florida Statutes is exempt from the payment of Florida sales tax. Corporations, Individuals and other entities are impacted by Chapter 212, Florida Statutes according to the type of service, sale of commodity or other contractual arrangement to be made with the FGUA. By submittal of a properly executed response to a procurement request from the FGUA, the Bidder is acknowledging that he is aware of his statutory responsibilities for sales tax under Chapter 212, Florida Statutes.

The Florida Governmental Utility Authority is also exempt from most Federal excise taxes. By submittal of a properly executed response to a procurement request from the Florida Governmental Utility Authority, the Bidder is acknowledging that he is aware of his responsibilities for Federal excise taxes.

Bid Form

FGUA Pasco Systems Lift Station Pump & Motor Purchase

Bid Item No.	Lift Station No.	System	DESCRIPTION	UNIT	QTY	UNIT COST	EXTENDED COST
1	LS No. 9	Mad Hatter	25 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		
2	LS No. 11	Mad Hatter	25 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
3	LS No. 2	Mad Hatter	25 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
4	LS No. 12	Seven Springs	25 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		
5	LS No. 1	Seven Springs	10 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		
6	LS No. 13	Seven Springs	15 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		
7	LS No. 16	Seven Springs	3 HP submersible grinder sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
8	LS No. 2	Zephyr Shores	1 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		
9	LS No. 3	Zephyr Shores	3 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
10	LS No. 3	Aloha Gardens	5 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
11	LS No. 10	Aloha Gardens	3 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
12	LS No. 1	Lindrick	20 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		

FGUA Pasco Systems Lift Station Pump & Motor Purchase

Bid Item No.	Lift Station No.	System	DESCRIPTION	UNIT	QTY	UNIT COST	EXTENDED COST
13	LS No. 14	Lindrick	10 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
14	LS No. 12	Lindrick	10 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		
15	LS No. 2	Jasmine Lakes	3 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	1		
16	LS No. 6	Jasmine Lakes	5 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
17	LS No. 2	Palm Terrace	4 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		
18	LS No. 4	Palm Terrace	5 HP submersible non-clog sewage pump, with 50' power cord and recessed impeller. Proposed replacement pumps must match the existing pump & motor characteristics as shown in Attachment "A" as well as the attached General Specifications. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.	EA	2		

Total Price (Sum of Items 1 thru 18) \$ _____

TOTAL PRICE (WRITTEN IN WORDS):
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The total quoted price for each pump & motor shall be inclusive of all items, shipping to 2341 Chatlin Rd. Holiday, FL, and warranty. Bid pricing shall NOT include sales tax. FGUA reserves the right to award the purchase for each individual pump & motor to one or more vendors.

Company Name: _____

Authorized Agent Signature: _____

Authorized Agent Name & Title: _____

Date: _____

Bidders Acknowledgement Form

When given a specific option with a blank (example a. _____), bidder shall write a “check mark” or write “yes” indicating the specification is met or the requirement is acknowledged. In the event a specification cannot be met, bidder shall indicate so by writing in “NO” or leaving the item blank and indicating how the specification is not met or how the unit(s) bid differ from what has been specified. This form shall be submitted with the bid.

1. General

- 1.1 Unit(s) shall be delivered to 2341 Chatlin Rd. Holiday, FL
- 1.2 All unit(s) bid shall meet or exceed the minimum requirements or they will be deemed incomplete and will not be considered for bid award.
- 1.3 All specifications written are minimums unless otherwise noted.
- 1.4 Physical and electrical installation of the pump and all ancillary appurtenances shall be the responsibility of the FGUA. This bid does not include any installation services and is for parts and equipment only.

_____ Bid is inclusive of all items, shipping and warranty. Bid pricing does NOT include sales tax.

_____ Unit(s) bid are new and of the latest standard production model as offered for commercial trade.

_____ The specifications and performance curves for the proposed pumps have been included with the Bid

_____ Unit(s) bid price shall be valid for the most current model year being sold.

_____ Bidder acknowledges and complies with the warranty requirements of this bid.

_____ Delivery shall include a package slip listing Make / Model / Serial #s for the equipment delivered.

_____ Bidder has evaluated the existing pump information, performance curves and specifications, and the proposed replacement pumps meet these performance requirements.

_____ All addenda have been acknowledged (if issued)

_____ The bid form has been signed by an authorized agent of the Company, Corporation, LLC, etc...

Lift Station Pump General Specifications

The FGUA follows Pasco County's Standard for Design and Construction of Water, Wastewater and Reclaimed Water Facilities 2006 Edition and as such all proposed pumps shall be manufactured by one of the following companies or approved equal:

1. Flygt
2. A.B.S.
3. Myers
4. Hydromatic
5. EBARA

Approval must be obtained in writing before submission of bid for a pump manufacturer not listed above. All pumps must be submersible-type.

Sewage Pumps and Motors:

General: Sewage pumping units shall be capable of handling raw, unscreened sewage and shall be capable of passing a sphere of at least three (3) inches in diameter, unless noted otherwise. Pumps shall be electrical motor driven and of a proven design that has been in sewage service under similar conditions for at least five years. Pumps shall provide the required peak design performance requirements and be suitable for operation within the total hydraulic range of operation. Certified pump curves shall be provided with all proposed pumps.

Submersible Pumps: The pump design shall provide for easy removal and replacement for inspection or maintenance purposes, without bolts or other fastenings to be removed. The units shall be nonclog, mechanical seal, submersible sewage pumps unless noted otherwise.

The pumps shall be provided with a tandem double mechanical seal running in an oil bath. Conventional double mechanical seals with a springs assembly between the rotating faces, requiring constant differential pressure to effect sealing, are not acceptable.

The stator casing, oil casing, volute, and impeller shall be of Class 30, gray iron construction, with all external parts coming into contact with sewage protected by a coating of high build epoxy, or equal, resistant to sewage. All external bolts and nuts shall be stainless steel. The impeller shall be nonclog design, capable of passing three-inch solids, fibrous material, heavy sludge, and constructed with long thruway with no acute turns.

The pump motor shall be of Class F insulation, NEMA B design, watertight, and air/oil filled or positively oil cooled. The pump motor shall be guaranteed to run in a totally, partially, or nonsubmerged condition continuously for a period of 24 hours without damages.

The pump shaft shall be of stainless steel and supported by a double row inboard bearing for axial thrust and a single row outboard bearing for radial thrust. The impeller shall be connected to a short sturdy shaft in order to minimize shaft deflection.

The pump conductor shall be of continuous stranded cable (no splices), in compliance with industry standard for load and resistance against sewage. The conductor shall enter the pump through a heavy-duty entry assembly which shall be provided with an internal grommet assembly to protect against leakage once secured and must have a strain relief assembly as part of standard construction.

Each pump shall be tested in the manufacturer's shop to demonstrate the proper operation of all components. The testing shall determine overheating of bearings, motors, or other components. Test results shall be provided to the FGUA.

Pump Motors: Motors shall comply with the requirements set forth under National Electric Codes and shall additionally be nonoverloading, excluding service factor, throughout the entire operating range of the pumps. Two or more normally closed heat sensing miniature switches connected in series and embedded within the motor windings shall be provided to shut off power and initiate alarm light for motor over-temperature condition. Submersible pump motors shall be capable of continuous operation under submerged as well as dry conditions without damage.

Warranty:

In order to ensure the proper performance and compatibility of interacting components within the intent of these specifications, the pumps and associated appurtenances shall be warranted by the supplier.

The pump manufacturer shall warrant the pumps and accessories being supplied to the FGUA against defects in workmanship and materials under normal use, operation and service for a minimum of 24 months from the date of delivery / 18 months from the date of installation. In addition, the manufacturer shall replace certain parts which shall become defective through normal use and wear on a progressive schedule of cost for a period of five years; parts included are the mechanical seal, impeller, pump housing, wear ring and ball bearing. The warranty shall be in published form from the manufacturer and apply to all similar units.

Attachment A

Bid Item No. 1

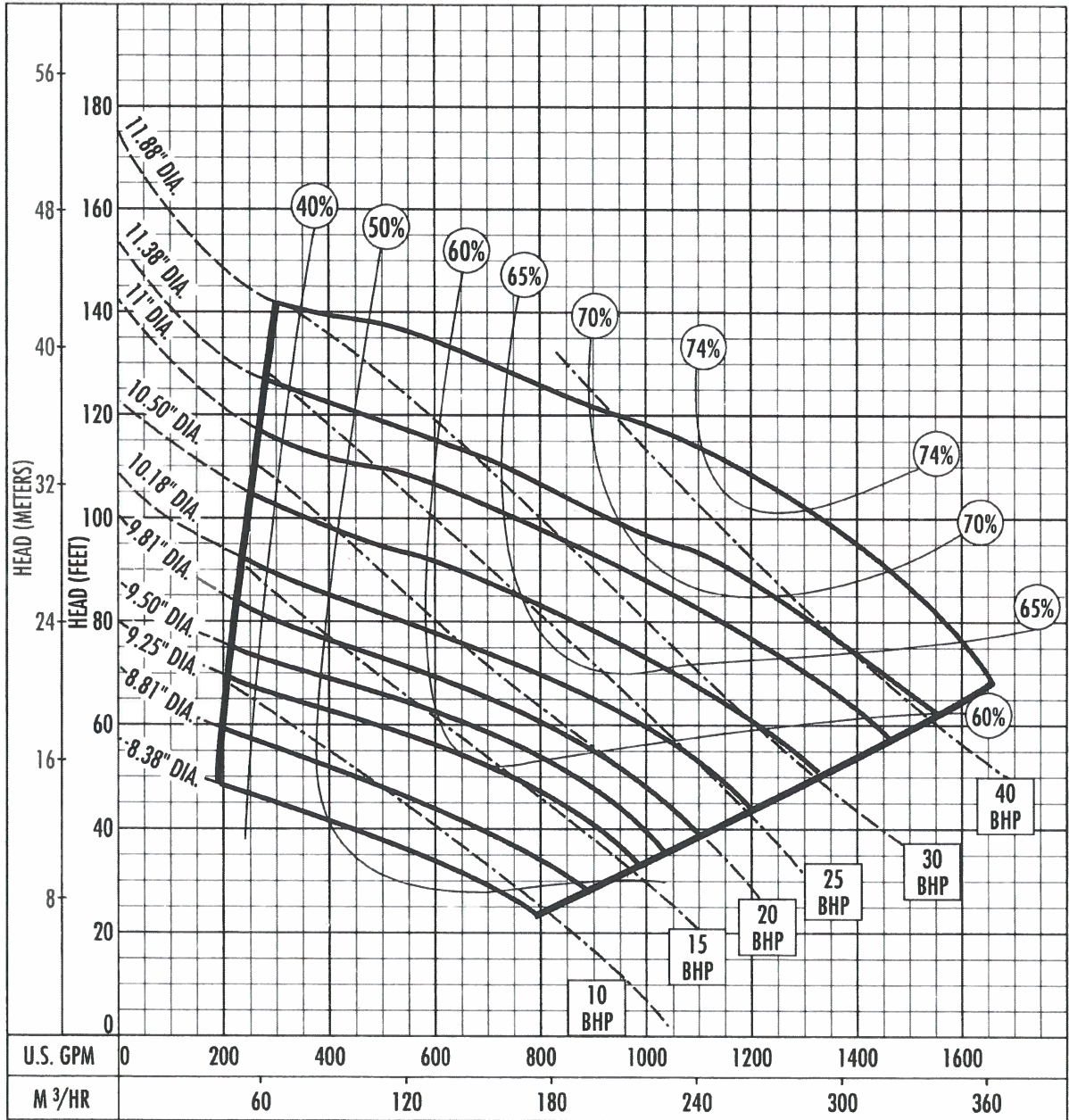
Existing Pump Info

Make	Hydromatic
Horsepower	25
Model No.	S4L2500M3-4
Serial No.	21737
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3.25"
Impeller Size	10.18"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Curve – S4L/S4LX

RPM: 1750 DISCHARGE: 4" SOLIDS: 3-1/4"



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

Conditions of Service:

Bid Item No. 2

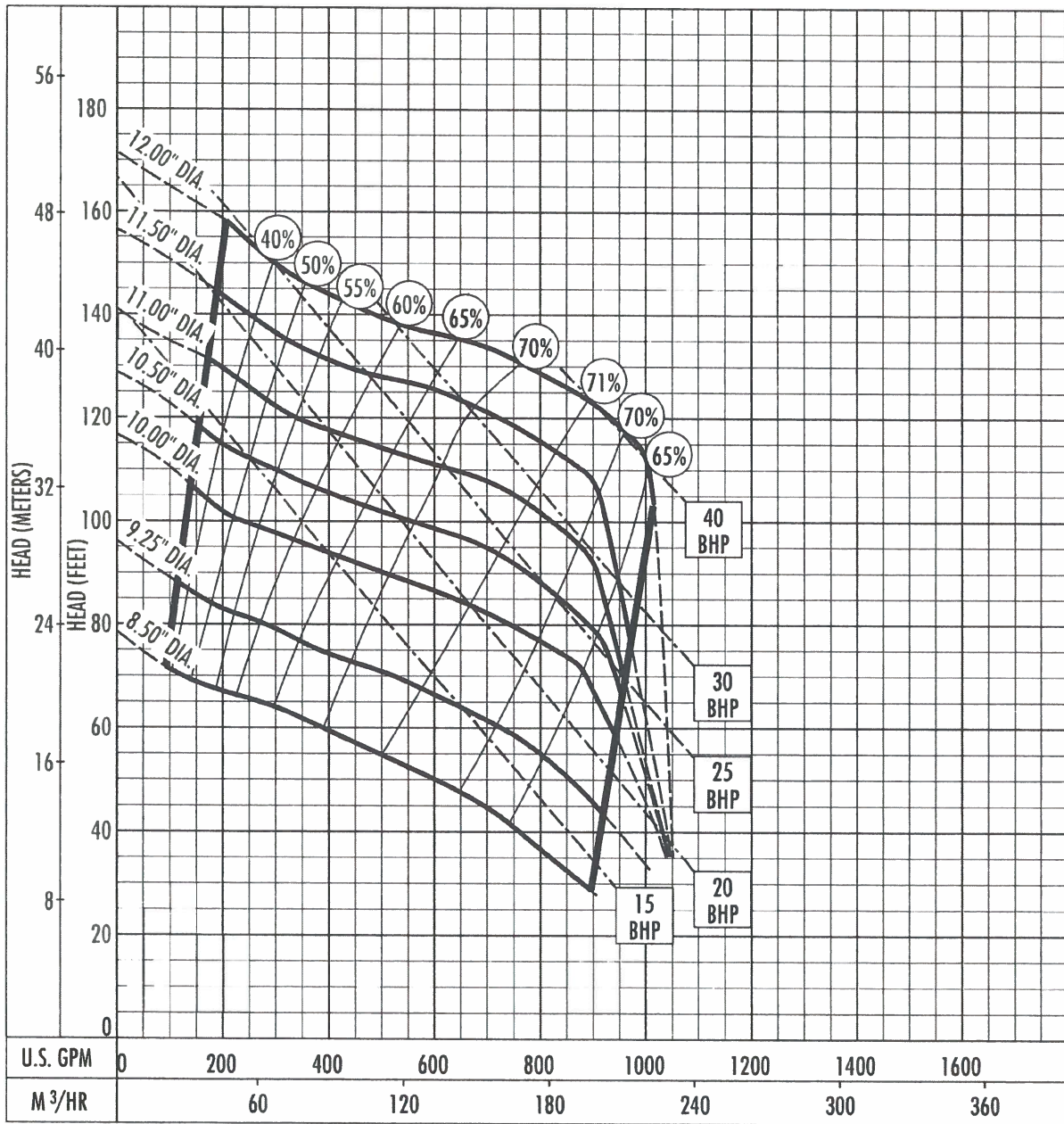
Existing Pump Info

Make	Hydromatic
Horsepower	25
Model No.	S4K2500M3-4
Serial No.	S99498 & S99285
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	10.25"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Curve – S4K/S4KX

RPM: 1750 DISCHARGE: 4" SOLIDS: 3"



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

Conditions of Service:

Bid Item No. 3

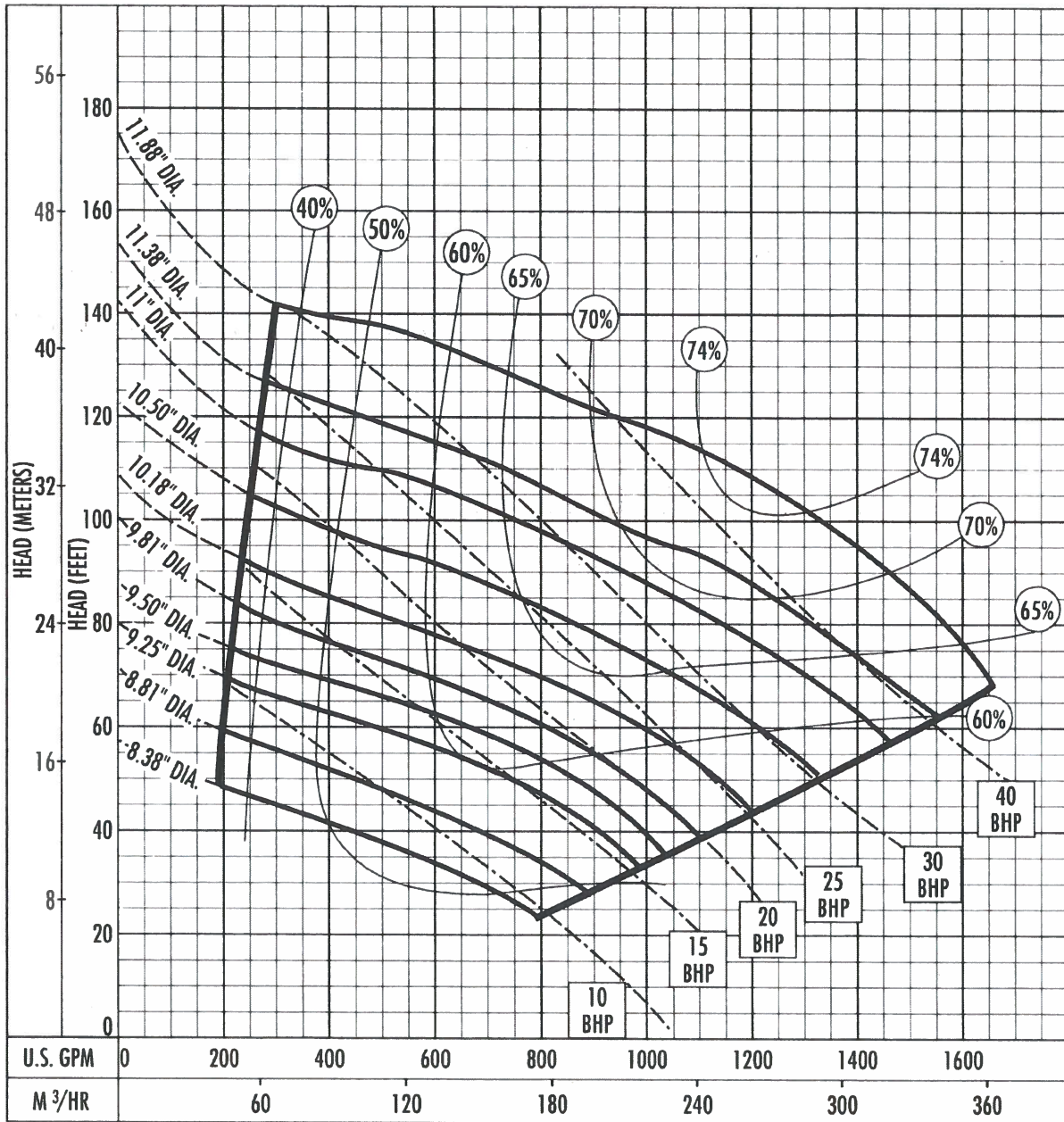
Existing Pump Info

Make	Hydromatic
Horsepower	25
Model No.	S4L2500M4-4
Serial No.	S13249 & S15091
Phase	3
Volts	460
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3.25"
Impeller Size	10.18"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Curve - S4L/S4LX

RPM: 1750 DISCHARGE: 4" SOLIDS: 3-1/4"



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

Conditions of Service:

Bid Item No. 4

Existing Pump Info

Make	Ebara
Horsepower	25
Model No.	100DLF618
Serial No.	10631-08
Phase	3
Volts	230
Speed (RPM)	1800
Discharge Size	4"
Max Solid Size	3"
Impeller Size	8.386"

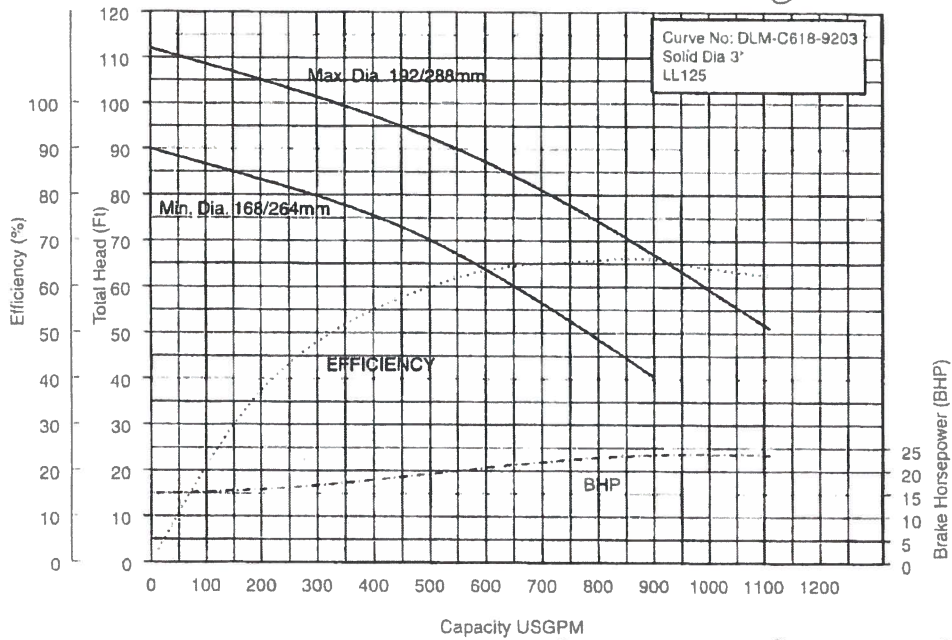
Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Curves

Project: _____ GPM: _____ TDH: _____ EFF: _____ HP: _____ Chk'd: _____ Date: _____

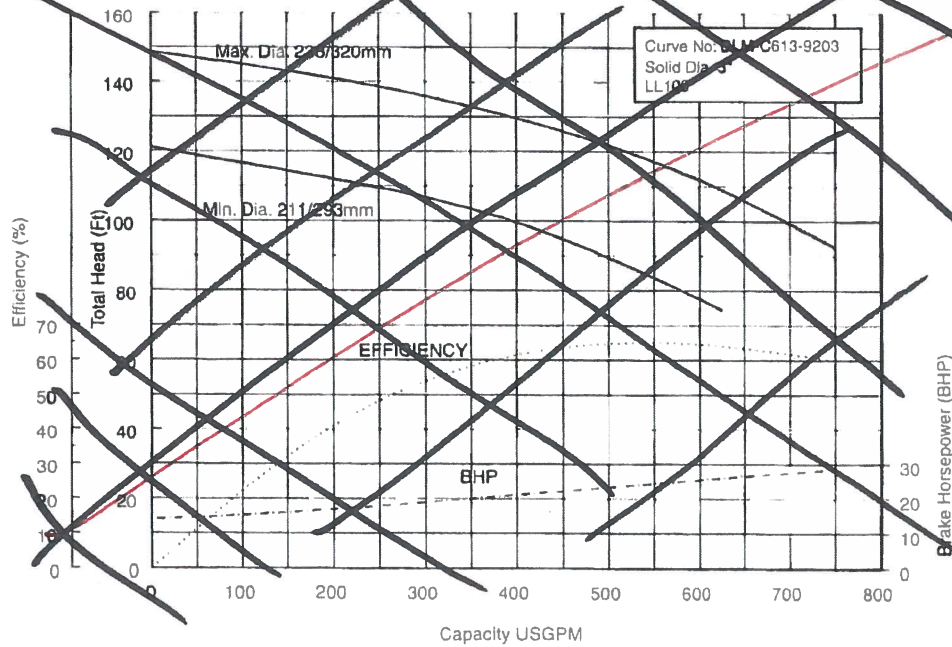
100DLF618 (25HP) Synchronous Speed: 1800 RPM

4, 6 inch Discharge



~~100DLMF622 (30HP) Synchronous Speed: 1800 RPM~~

~~3, 4 inch Discharge~~



Bid Item No. 5

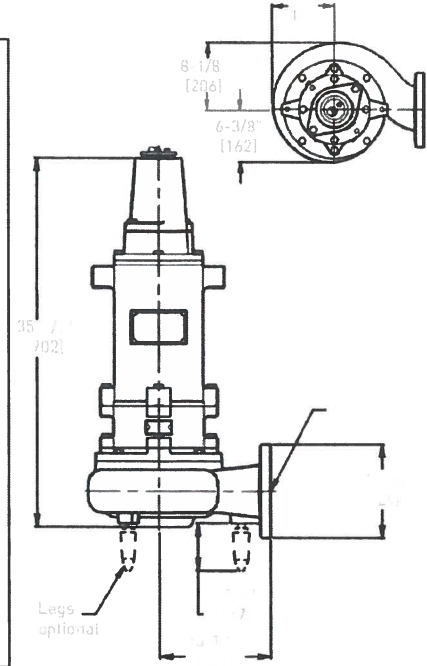
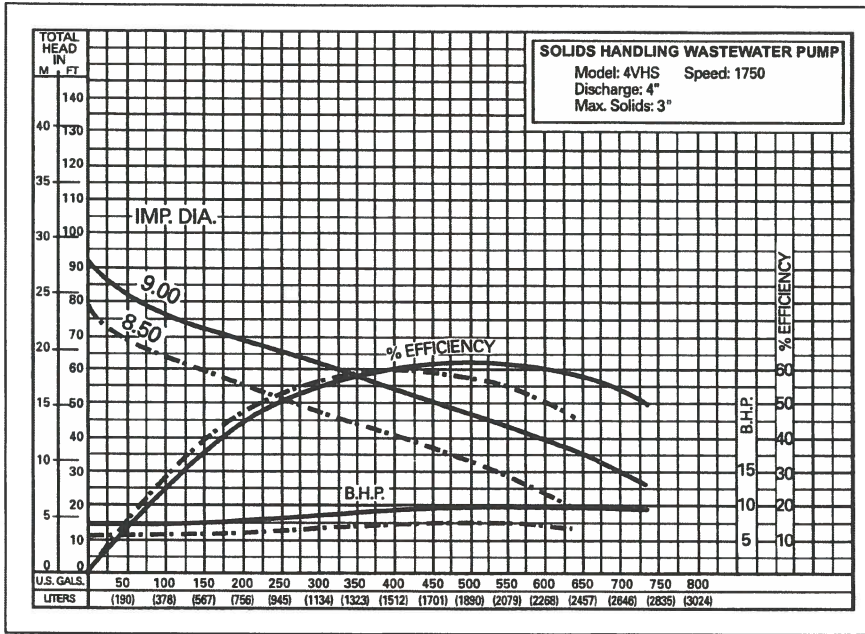
Existing Pump Info

Make	Myers
Horsepower	10
Model No.	4VHS100M4-23
Serial No.	S25093
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	8"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Data and Dimensions

1750 RPM



Note: Maximum impeller diameter for single phase pump is 9.5".

Available Models:		Motor Electrical Data												
Standard	Hazardous Location	HP	Volts	Phase	Hertz	Start Amps	Run Amps	Service Factor	Run kW	Service Factor kW	Start KVA	Run KVA	NEC Code Letter	Service Factor
4VHS75M4-21	4VHSX75M4-21	7.5	230	1	60	137	34	40.8	8.3	10.4	31.5	7.4	D	1.2
4VHS75M4-03	4VHSX75M4-03	7.5	200	3	60	153	30	36.8	8.3	10.4	53	10	H	1.2
4VHS75M4-23	4VHSX75M4-23	7.5	230	3	60	133	26	32	8.3	10.4	53	10	H	1.2
4VHS75M4-43	4VHSX75M4-43	7.5	460	3	60	66	13	16	8.3	10.4	53	10	H	1.2
4VHS75M4-53	4VHSX75M4-53	7.5	575	3	60	53	10	12.8	8.3	10.4	53	10	H	1.2
4VHS100M4-03	4VHSX100M4-03	10	200	3	60	204	40	48.3	11.3	13.9	70.7	13.9	H	1.2
4VHS100M4-23	4VHSX100M4-23	10	230	3	60	178	35	42	11.3	13.9	70.7	13.9	H	1.2
4VHS100M4-43	4VHSX100M4-43	10	460	3	60	89	17.5	21	11.3	13.9	70.7	13.9	H	1.2
4VHS100M4-53	4VHSX100M4-53	10	575	3	60	71	14	16.8	11.3	13.9	70.7	13.9	H	1.2

		Motor Efficiency %				Power Factor %			
HP	Phase	Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
7.5	1	77	77	75	67	98	98	97	92
7.5	3	78	77	74	67.5	81.5	80	75.5	68
10	3	80	80	77	70.5	83	81.5	75.5	67



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Bid Item No. 6

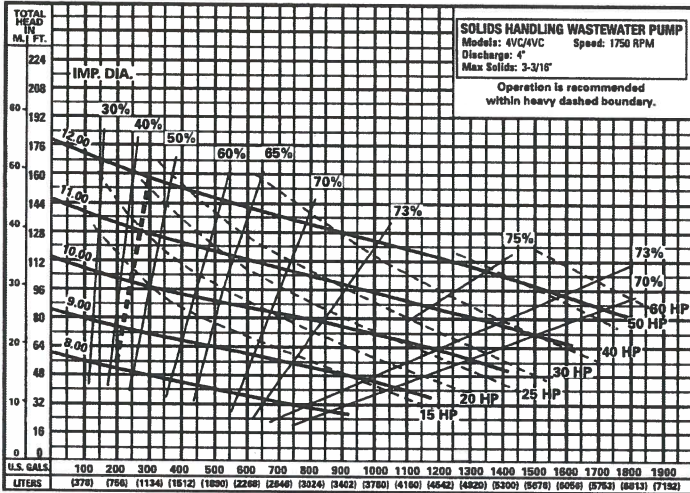
Existing Pump Info

Make	Myers
Horsepower	15
Model No.	4VC150
Serial No.	19457
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3-3/16"
Impeller Size	8"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Data

1750 RPM



Pump performance is based on clear water (1.0 specific gravity @ 68°F) and pump fluid end (hydraulic) efficiency. Motor data based on 40°C ambient temperature.

Available Models				Motor Electrical Data										
Standard	Hazardous Location	HP	Volts	Phase	Hertz	Start Amps	Run Amps	Service Factor Amps	Run kW	Service Factor kW	Start KVA	Run KVA	NEC Code Letter	Service Factor
4VC150M4-03	4VCX150M4-03	15	200	3	60	334	50.6	61	15.0	18.6	115.5	17.5	E	1.2
4VC150M4-23	4VCX150M4-23	15	230	3	60	290	44	53	15.0	18.6	115.5	17.5	E	1.2
4VC150M4-43	4VCX150M4-43	15	460	3	60	145	22	26.5	15.0	18.6	115.5	17.5	E	1.2
4VC150M4-53	4VCX150M4-53	15	575	3	60	116	17.6	21.2	15.0	18.6	115.5	17.5	E	1.2
4VC200M4-03	4VCX200M4-03	20	200	3	60	334	69	82.8	21.2	26.1	115.5	23.9	G	1.2
4VC200M4-23	4VCX200M4-23	20	230	3	60	290	60	72	21.2	26.1	115.5	23.9	G	1.2
4VC200M4-43	4VCX200M4-43	20	460	3	60	145	30	36	21.2	26.1	115.5	23.9	G	1.2
4VC200M4-53	4VCX200M4-53	20	575	3	60	116	24	28.8	21.2	26.1	115.5	23.9	G	1.2
4VC250M4-03	4VCX250M4-03	25	200	3	60	575	78.3	92.2	26.9	33.3	180.1	30.3	G	1.2
4VC250M4-23	4VCX250M4-23	25	230	3	60	452	76	92	26.9	33.3	180.1	30.3	G	1.2
4VC250M4-43	4VCX250M4-43	25	460	3	60	226	38	46	26.9	33.3	180.1	30.3	G	1.2
4VC250M4-53	4VCX250M4-53	25	575	3	60	181	30.4	36.8	26.9	33.3	180.1	30.3	G	1.2
4VC300M4-03	4VCX300M4-03	30	200	3	60	575	103.9	124	33.3	41.3	180.1	37.4	G	1.2
4VC300M4-23	4VCX300M4-23	30	230	3	60	452	94	114	33.3	41.3	180.1	37.4	G	1.2
4VC300M4-43	4VCX300M4-43	30	460	3	60	226	47	57	33.3	41.3	180.1	37.4	G	1.2
4VC300M4-53	4VCX300M4-53	30	575	3	60	181	37.6	45.6	33.3	41.3	180.1	37.4	G	1.2
4VC400M4-23	4VCX400M4-23	40	230	3	60	580	122	148	43.2	53.0	231.1	48.6	G	1.2
4VC400M4-43	4VCX400M4-43	40	460	3	60	290	61	74	43.2	53.0	231.1	48.6	G	1.2
4VC400M4-53	4VCX400M4-53	40	575	3	60	232	48.8	59.2	43.2	53.0	231.1	48.6	G	1.2
4VC500M4-43	4VCX500M4-43	50	460	3	60	290	67	79	46.9	54.6	231.1	53.4	E	1.2
4VC500M4-53	4VCX500M4-53	50	575	3	60	232	54	63	46.9	54.6	231.1	53.4	E	1.2
4VC600M4-43	4VCX600M4-43	60	460	3	60	290	79	79	52.8	52.8	231.1	62.9	C	1.0
4VC600M4-53	4VCX600M4-53	60	575	3	60	232	63	63	52.8	52.8	231.1	62.9	C	1.0

Motor Efficiencies and Power Factor									
HP	Phase	Motor Efficiency %				Power Factor %			
		Service Factor Load	100% Load	75% Load	50% Load	Service Factor Load	100% Load	75% Load	50% Load
15	3	85	84	79	69	88	86	78	68
20	3	88	87.5	81	72.5	91	89	79	69
25	3	87	86	81	73	91	89	80	70
30	3	87	86	83	79	91	89	82	73
40	3	86	86	88	87.5	90	89	86	80
50	3	87	86	86.5	88	87	88	88.5	84
60	3	87	87	86	88	84	84	89	86

Bid Item No. 7

Existing Pump Info

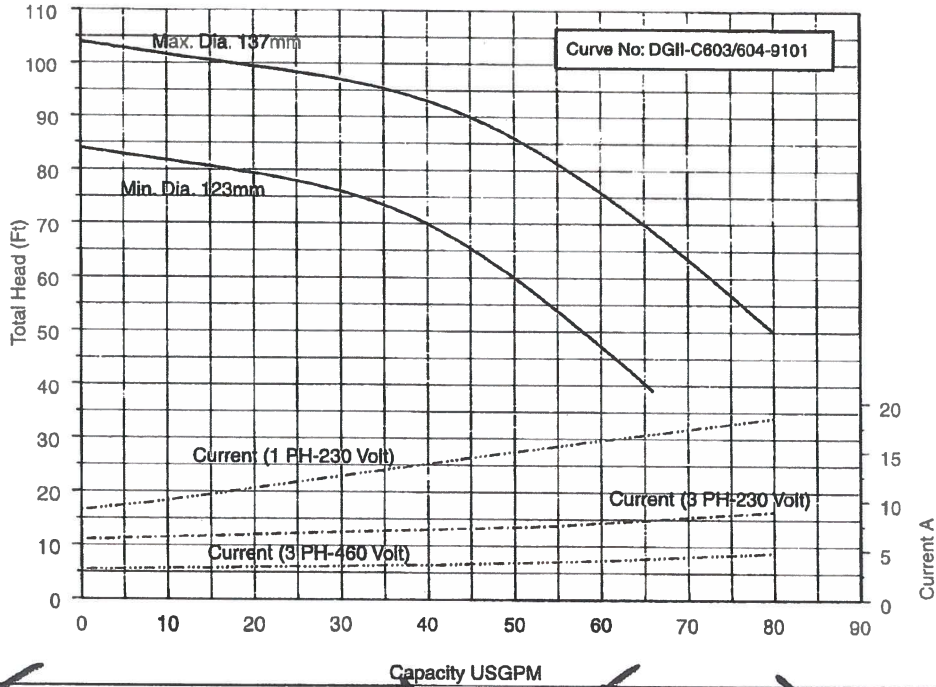
Make	Ebara
Horsepower	3
Model No.	50 DGF62.2S - Grinder
Serial No.	
Phase	1
Volts	230
Speed (RPM)	3600
Discharge Size	2"
Max Solid Size	
Impeller Size	4.843"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

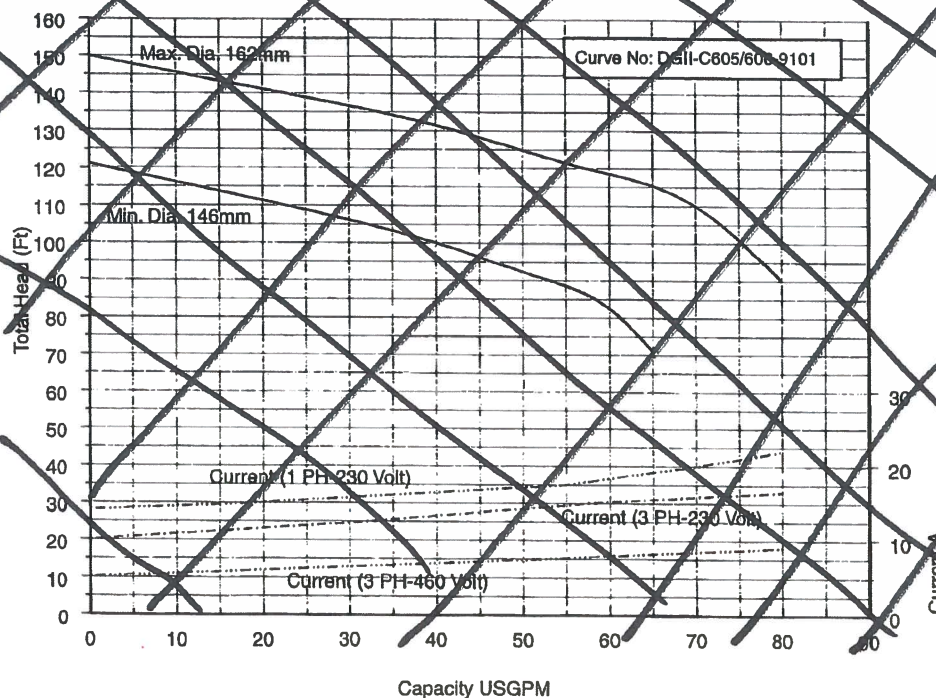
Performance Curves

Project: _____ GPM: _____ TDH: _____ EFF: _____ HP: _____ Chk'd: _____ Date: _____

50DGF62.2S 50DGFU62.2 (3HP) Synchronous Speed: 3600 RPM 2 inch Discharge



~~50DGF63.7S 50DGFU63.7 (5HP) Synchronous Speed: 3600 RPM 2 inch Discharge~~



Bid Item No. 8

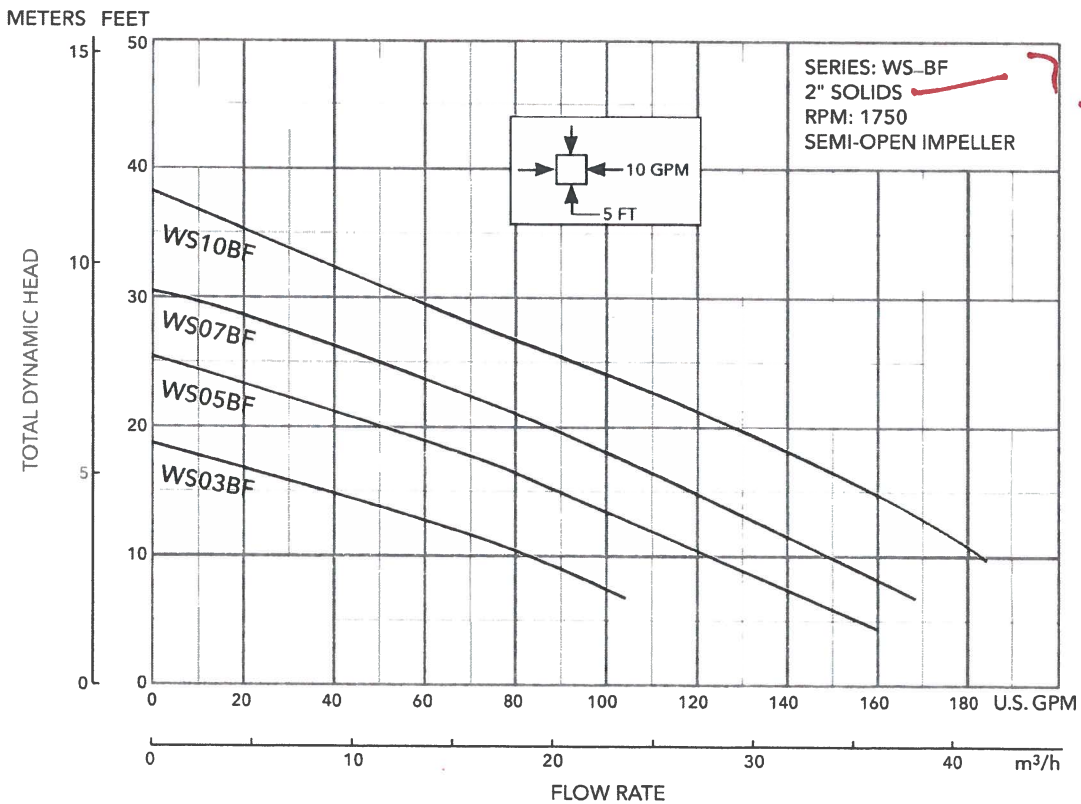
Existing Pump Info

Make	Goulds
Horsepower	1
Model No.	WS1012Bf
Serial No.	
Phase	1
Volts	230
Speed (RPM)	1750
Discharge Size	3"
Max Solid Size	2"
Impeller Size	5.75"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

MOTOR AND MODEL INFORMATION

Order Number	HP	Phase	Volts	RPM	Impeller Dia. (In.)	Max. Amps	LRA	KVA Code	Full Load Motor Eff.	Resistance		Wt. (Lbs.)
										Start	Line-Line	
WS0311BF	0.33	1	115	1750	4.69	10.7	30.0	M	54	11.9	1.7	63
WS0318BF	0.33	1	208			6.8	19.5	K	51	9.1	4.2	
WS0312BF	0.33	1	230			4.9	14.1	L	53	14.5	8.0	
WS0511BF	0.5	1	115		5.00	14.5	31.1	J	55	9.3	1.4	65
WS0518BF	0.5	1	208			8.0	19.5	K	51	9.1	4.2	
WS0512BF	0.5	1	230			7.3	16.5	J	54	11.7	5.6	
WS0538BF	0.5	3	200			3.8	12.3	K	75	-	6.7	
WS0532BF	0.5	3	230			3.3	9.7	K	75	-	9.9	
WS0534BF	0.5	3	460			1.7	4.9	K	75	-	39.4	
WS0537BF	0.5	3	575		1.4	4.3	K	68	-	47.8		
WS0718BF	0.75	1	208		5.38	11.0	39.0	K	65	2.6	1.4	85
WS0712BF	0.75	1	230			9.4	24.8	J	57	4.8	2.3	
WS0738BF	0.75	3	200			4.1	21.2	H	74	-	4.3	
WS0732BF	0.75	3	230			3.6	17.3	J	76	-	5.6	
WS0734BF	0.75	3	460			1.8	8.9	J	76	-	22.4	
WS0737BF	0.75	3	575			1.5	7.3	J	71	-	29.2	
WS1018BF	1	1	208		5.75	14.0	39.0	K	65	2.6	1.4	85
WS1012BF	1	1	230			12.3	30.5	H	60	4.3	1.8	
WS1038BF	1	3	200			6.0	21.2	H	74	-	4.3	
WS1032BF	1	3	230			5.8	17.3	J	76	-	5.6	
WS1034BF	1	3	460			2.9	8.9	J	76	-	22.4	
WS1037BF	1	3	575			2.4	7.3	J	71	-	29.2	



Bid Item No. 9

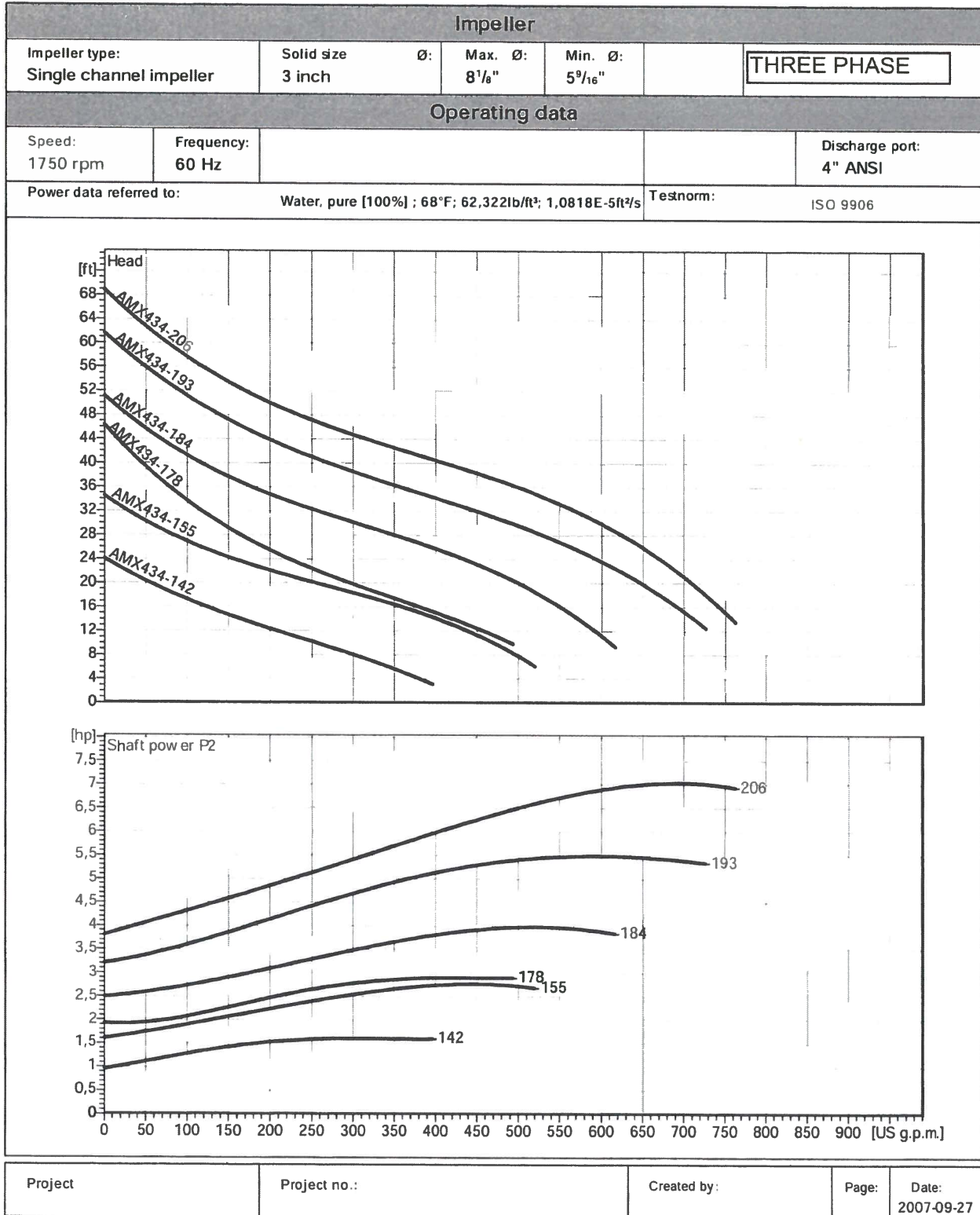
Existing Pump Info

Make	Homa
Horsepower	3
Model No.	AMX434-17872.9N
Serial No.	60477 / 66678
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	TBD

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Family Curve

AMX434-142...206



Bid Item No. 10

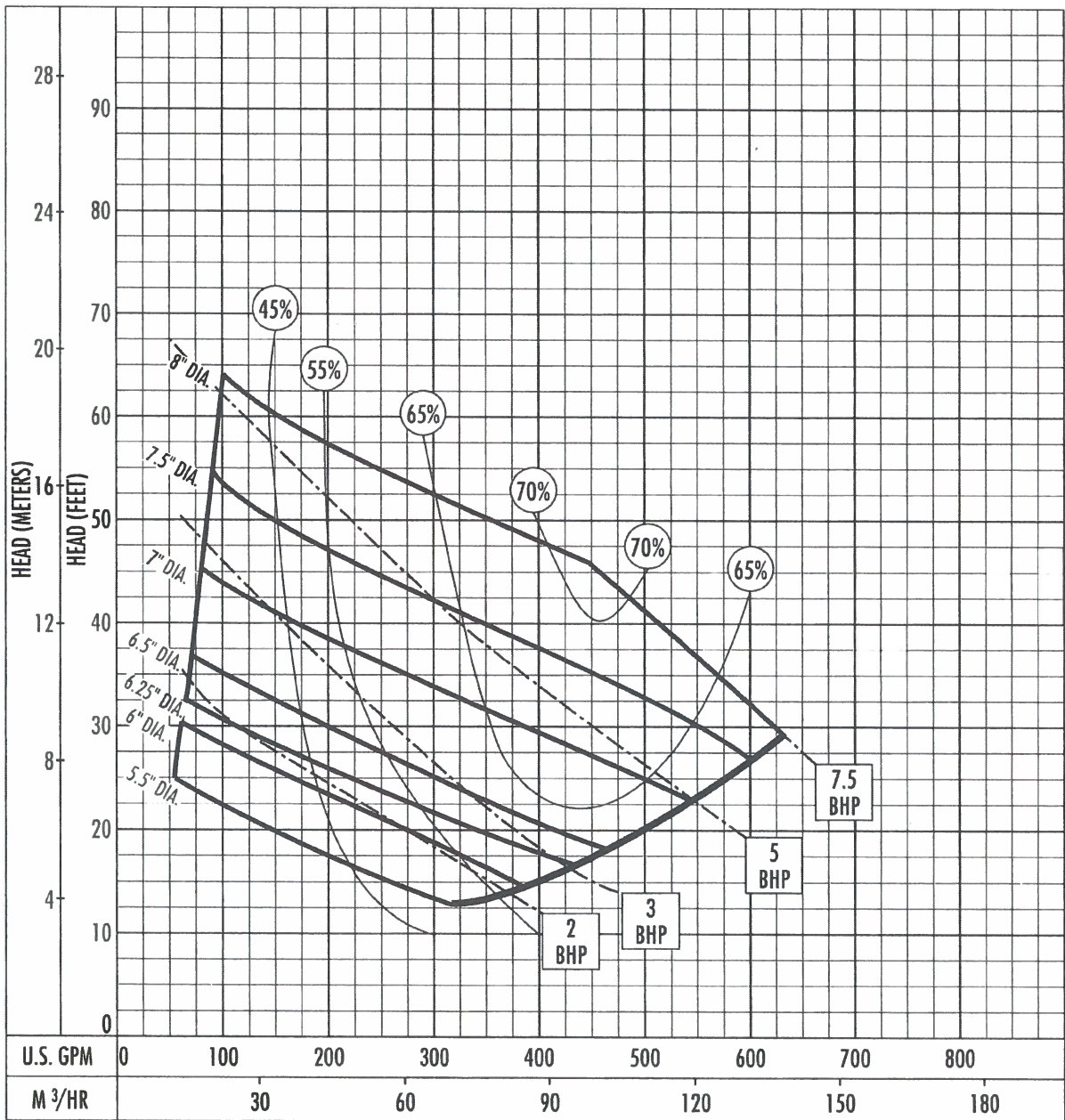
Existing Pump Info

Make	Hydromatic
Horsepower	5
Model No.	S4NS00M3-4
Serial No.	S00128960 & S00128961
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	TBD

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Curve – S4N/S4NX

RPM: 1750 DISCHARGE: 4" SOLIDS: 3"



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

Conditions of Service:

Bid Item No. 11

Existing Pump Info

Make	Homa
Horsepower	3
Model No.	AMX 434/155/2.9T/C
Serial No.	130382
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	9.810"

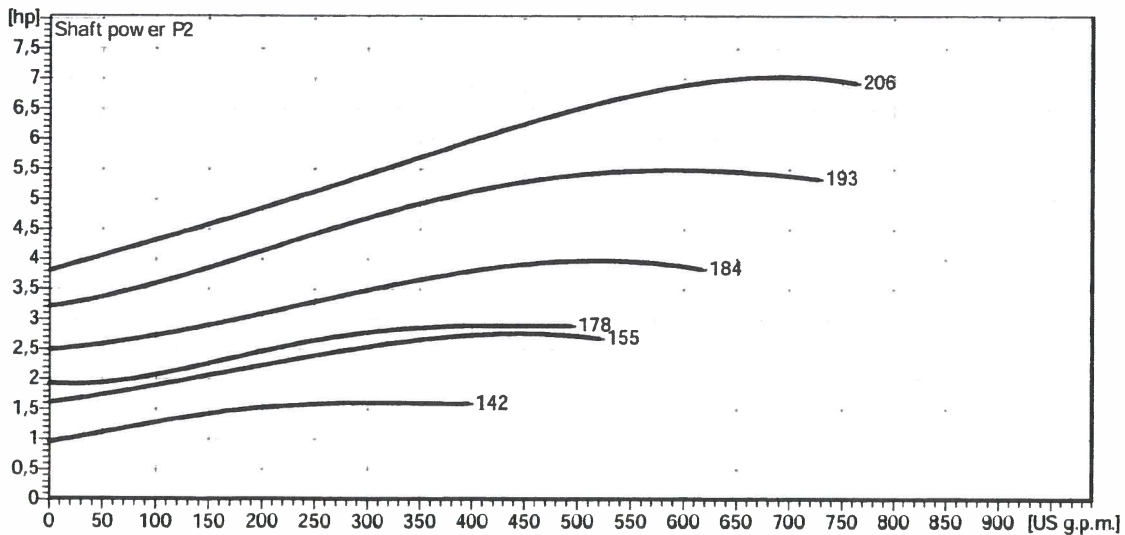
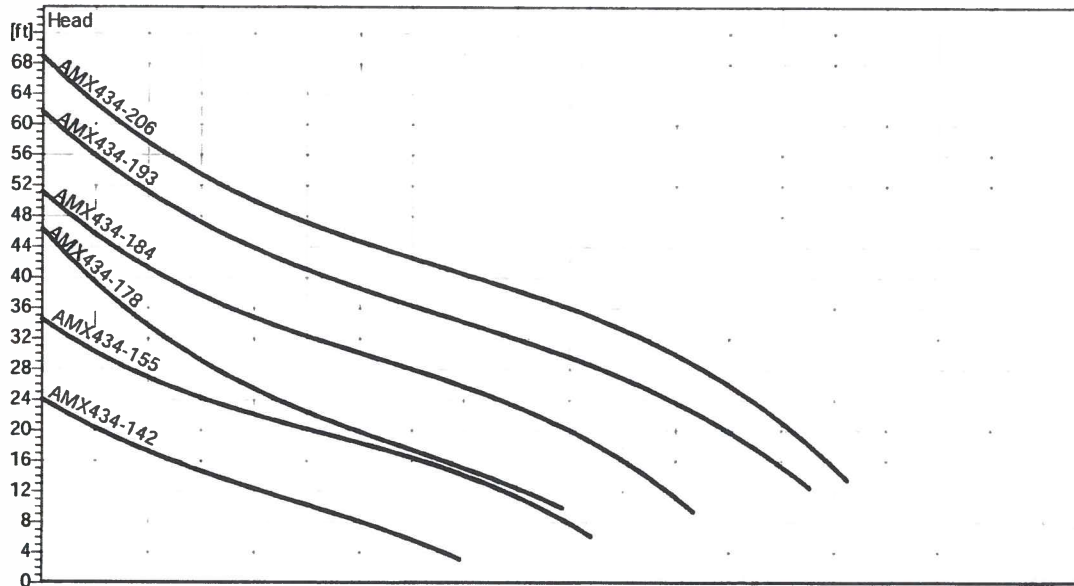
Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Family Curve

AMX434-142...206



Impeller					
Impeller type: Single channel impeller	Solid size 3 inch	Ø:	Max. Ø: 8 1/8"	Min. Ø: 5 9/16"	THREE PHASE
Operating data					
Speed: 1750 rpm	Frequency: 60 Hz				Discharge port: 4" ANSI
Power data referred to:			Water, pure [100%] ; 68°F; 62,322lb/ft³; 1,0818E-5ft²/s		Testnorm: ISO 9906



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Bid Item No. 12

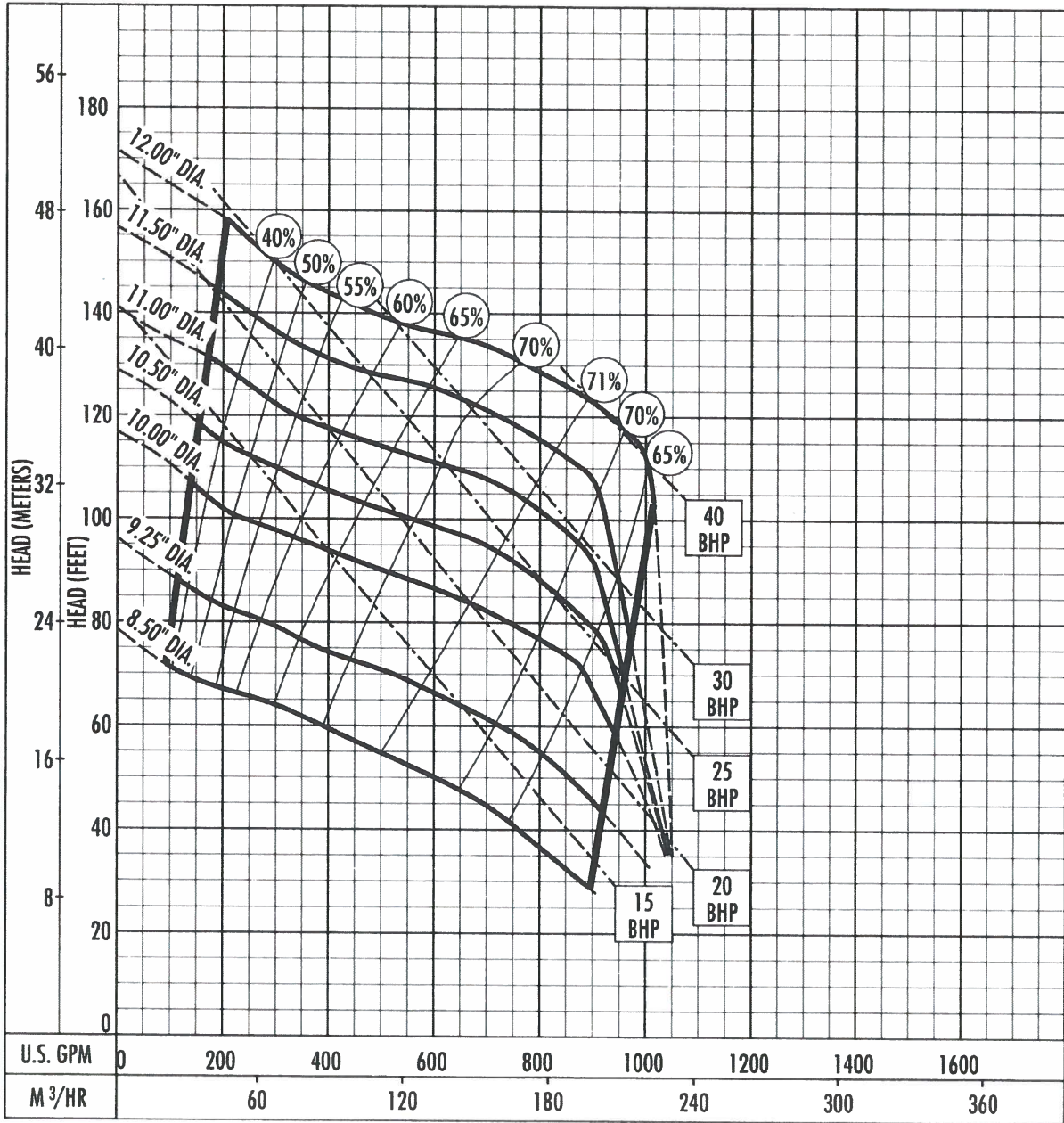
Existing Pump Info

Make	Hydromatic
Horsepower	20
Model No.	S4K2000M3-4
Serial No.	S00166394U & S39351
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	8.386"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Curve – S4K/S4KX

RPM: 1750 DISCHARGE: 4" SOLIDS: 3"



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

Conditions of Service:

Bid Item No. 13

Existing Pump Info

Make	Ebara
Horsepower	10
Model No.	100DMLE6.752
Serial No.	45957/2/2
Phase	3
Volts	230
Speed (RPM)	1800
Discharge Size	4"
Max Solid Size	3"
Impeller Size	8.386"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

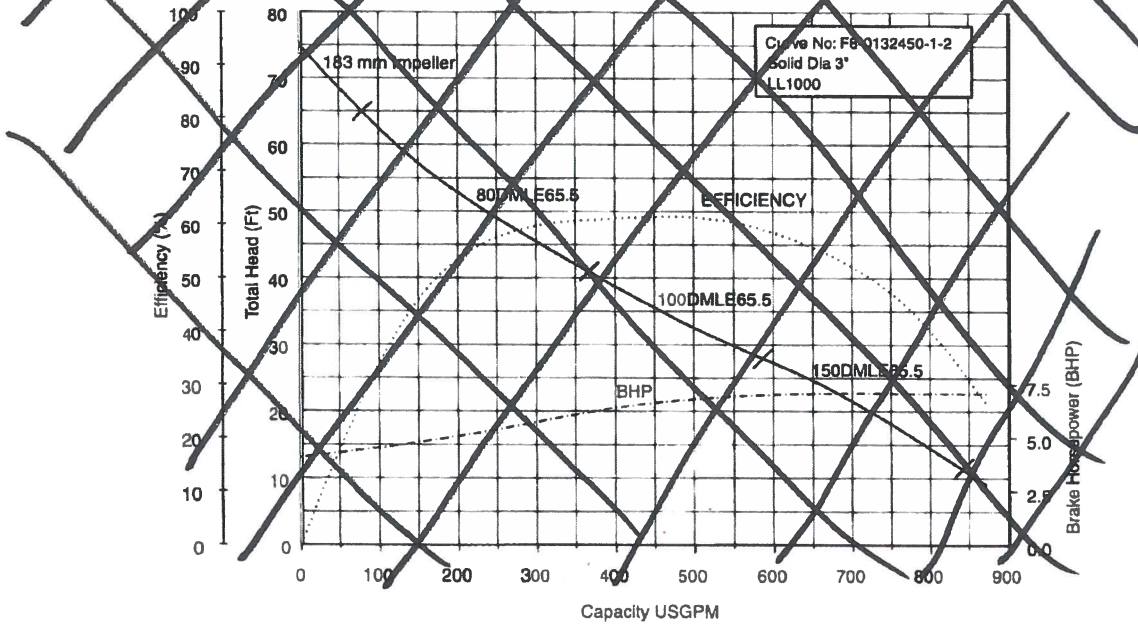
EBARA Submersible Wastewater Pumps

DMLEU

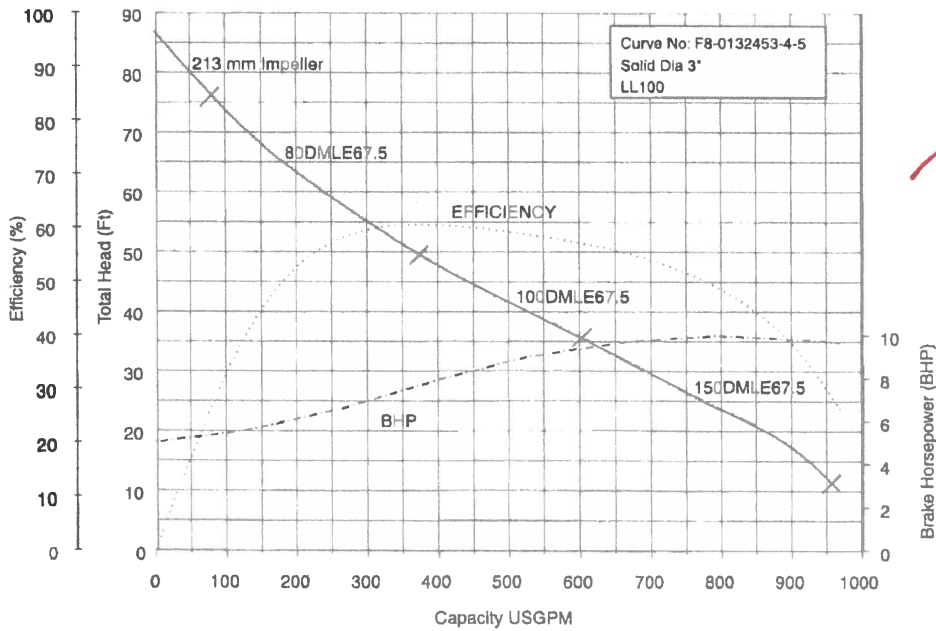
Performance Curves

Project: _____ GPM: _____ TDH: _____ EFF: _____ HP: _____ Chk'd: _____ Date: _____

80, 100, 150DMLE65.5 (7.5HP) Synchronous Speed: 1800 RPM 3, 4, 6 Inch Discharge



80, 100, 150DMLE67.5 (10HP) Synchronous Speed: 1800 RPM 3, 4, 6 inch Discharge



Bid Item No. 14

Existing Pump Info

Make	Ebara
Horsepower	10
Model No.	100DMLE6.752
Serial No.	45957/2/2
Phase	3
Volts	230
Speed (RPM)	1800
Discharge Size	4"
Max Solid Size	3"
Impeller Size	6.102"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

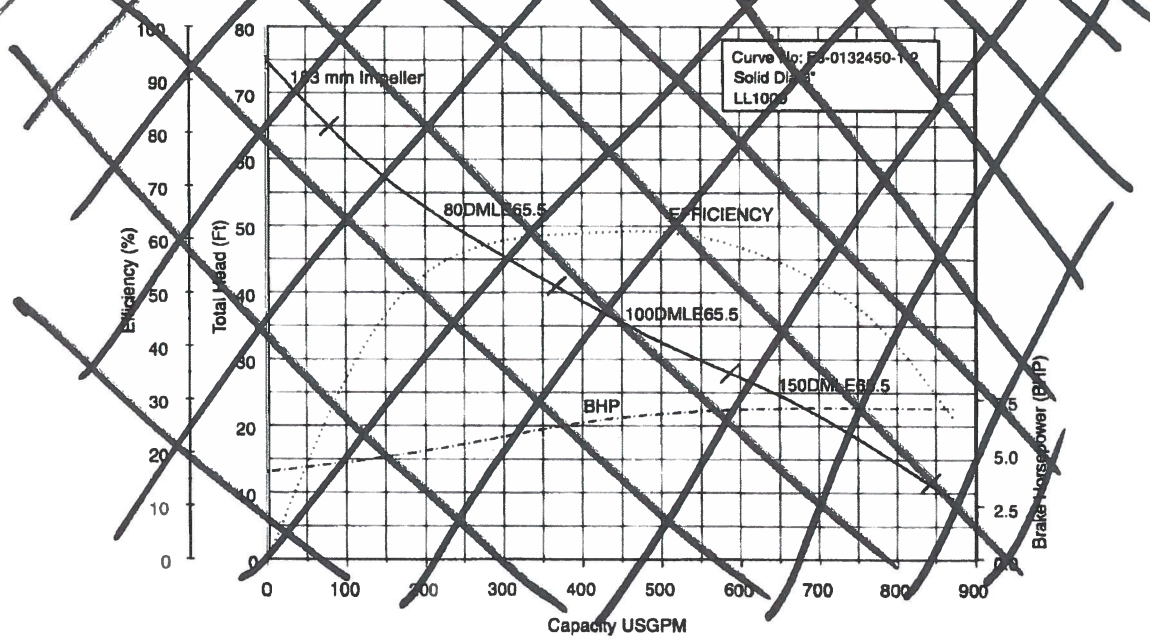
EBARA Submersible Wastewater Pumps

DMLEU

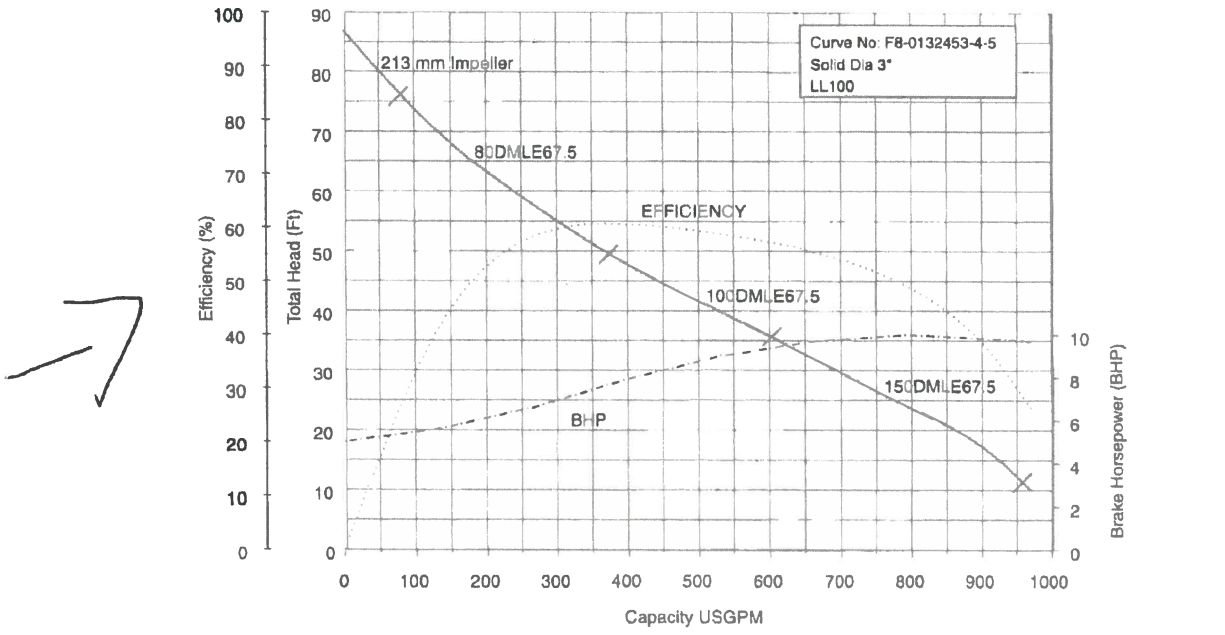
Performance Curves

Project: _____ GPM: _____ TDH: _____ EFF: _____ HP: _____ Chk'd: _____ Date: _____

80, 100, 150DMLE65.5 (7.5HP) Synchronous Speed: 1800 RPM 3, 4, 6 inch Discharge



80, 100, 150DMLE67.5 (10HP) Synchronous Speed: 1800 RPM 3, 4, 6 inch Discharge



Bid Item No. 15

Existing Pump Info

Make	Homa
Horsepower	3
Model No.	AMX434-155/2.9N
Serial No.	
Phase	3
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	7.008"

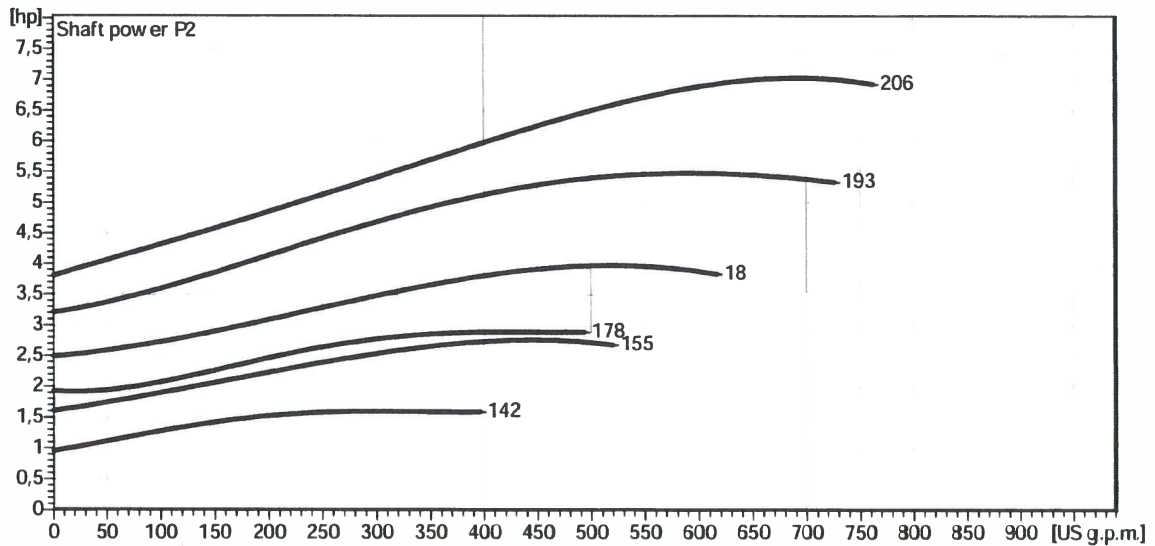
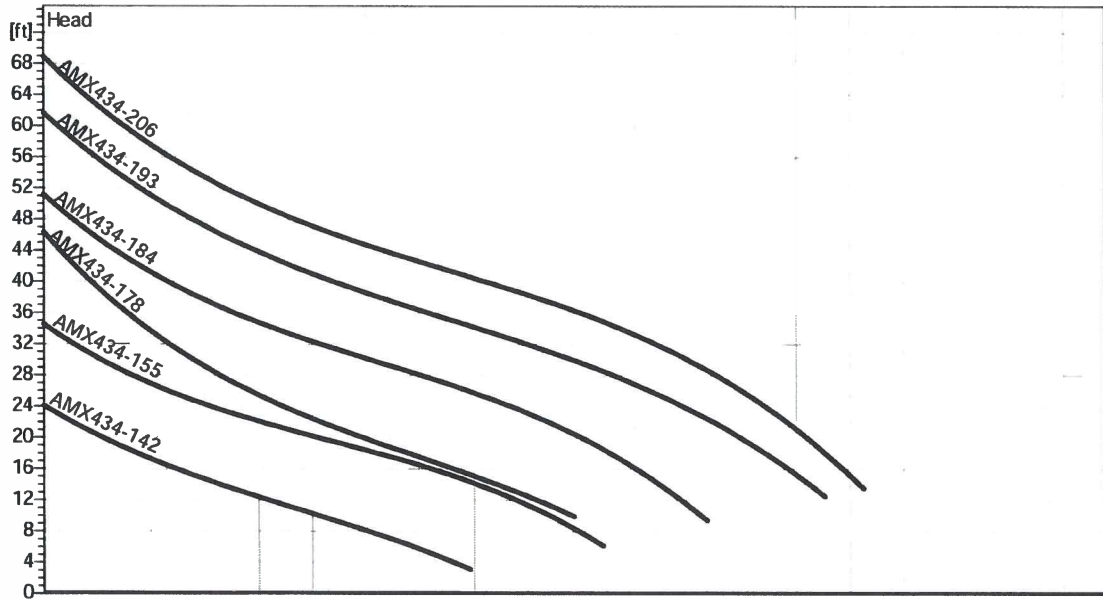
Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Family Curve

AMX434-142...206



Impeller					
Impeller type: Single channel impeller	Solid size 3 inch	Ø:	Max. Ø: 8 1/8"	Min. Ø: 5 9/16"	THREE PHASE
Operating data					
Speed: 1750 rpm	Frequency: 60 Hz				Discharge port: 4" ANSI
Power data referred to:			Water, pure [100%] ; 68°F; 62,322lb/ft³; 1,0818E-5ft²/s		Testnom: ISO 9906



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Bid Item No. 16

Existing Pump Info

Make	Homa
Horsepower	5
Model No.	AMX 434/1-178/511/C
Serial No.	
Phase	1
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	6.102"

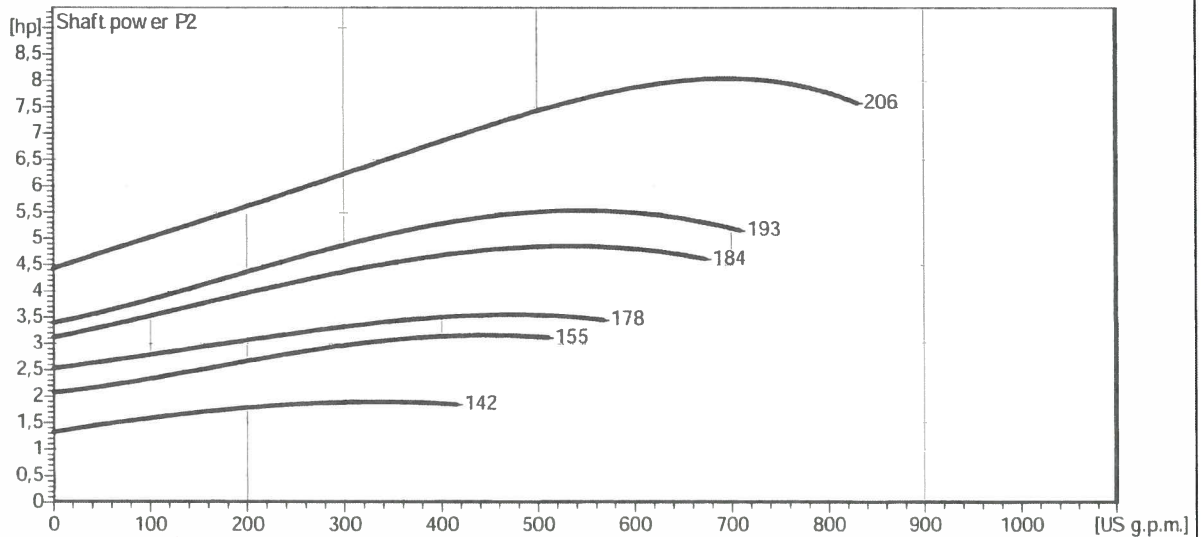
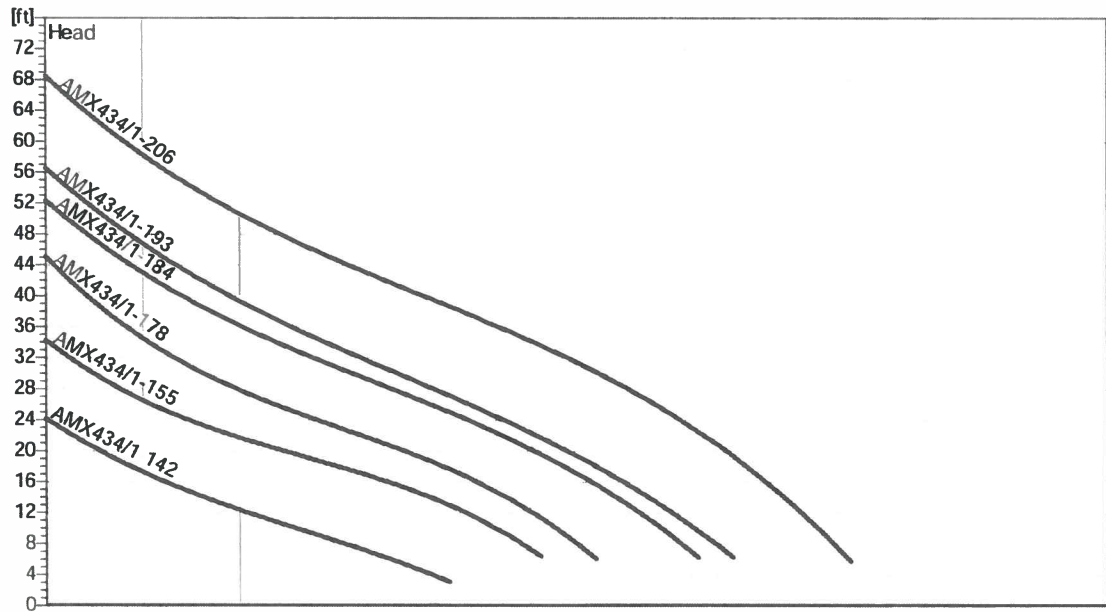
Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Family Curve

AMX434/1-142...206



Impeller				
Impeller type: Single channel impeller	Solid size 3 inch	Ø:	Max. Ø: 8 1/8"	Min. Ø: 5 9/16"
SINGLE PHASE				
Operating data				
Speed: 1750 rpm	Frequency: 60 Hz			Discharge port: 4" ANSI
Power data referred to: Water, pure [100%] ; 68°F; 62.322lb/ft³; 1.0818E-5ft²/s			Testnom:	ISO 9906



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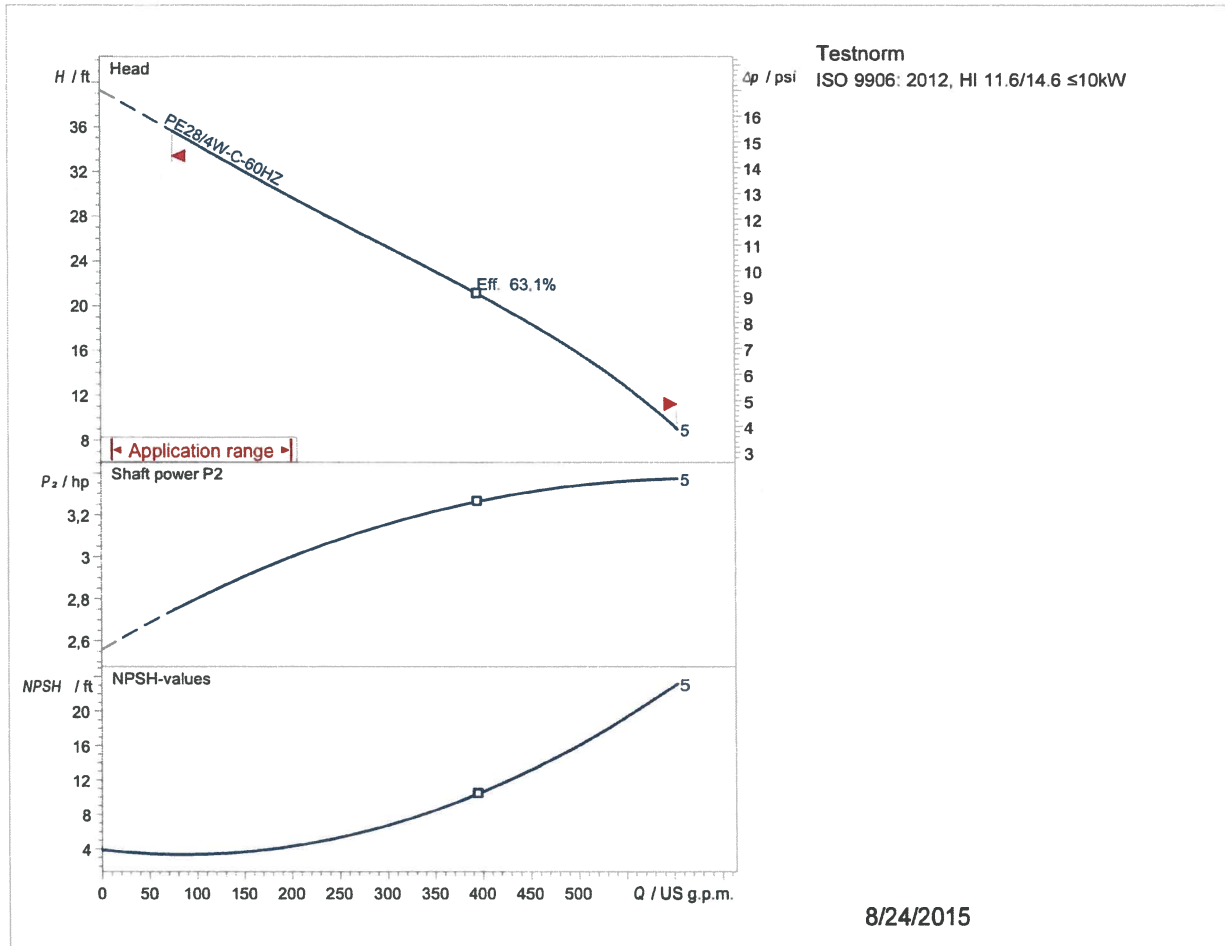
Bid Item No. 17

Existing Pump Info

Make	ABS
Horsepower	3.8
Model No.	XFP100C (M28/4W 1)
Serial No.	99032
Phase	1
Volts	230
Speed (RPM)	1750
Discharge Size	4"
Max Solid Size	3"
Impeller Size	7.717"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

XFP100C CB1 1~ 60HZ



Operating data specification		Head	
Flow		Shaft power	
Efficiency		Fluid	Water
NPSH		Nature of system	Single head pump
Temperature	68 °F		
No. of pumps	1		
Pump data		Make	SULZER
Type	XFP100C CB1 1~ 60HZ	Impeller	Contrablock Plus impeller, 1 vane
Series	XFP PE1-PE3	Impeller size	6,69 inch
N° of vanes	1	Suction port	DN100
Free passage	3 inch		
Discharge port	DN100		
Motor data		Frequency	60,0 Hz
Rated voltage	230 V	Nominal Speed	1740 rpm
Rated power P2	3,75 hp	Efficiency	78,5 %
Number of poles	4	Rated current	16,9 A
Power factor	0,92	Rated torque	11,4 lbf ft
Starting current	68,8 A	Degree of protection	IP 68
Starting torque	17,6 lbf ft	No. starts per hour	15
Insulation class	A		

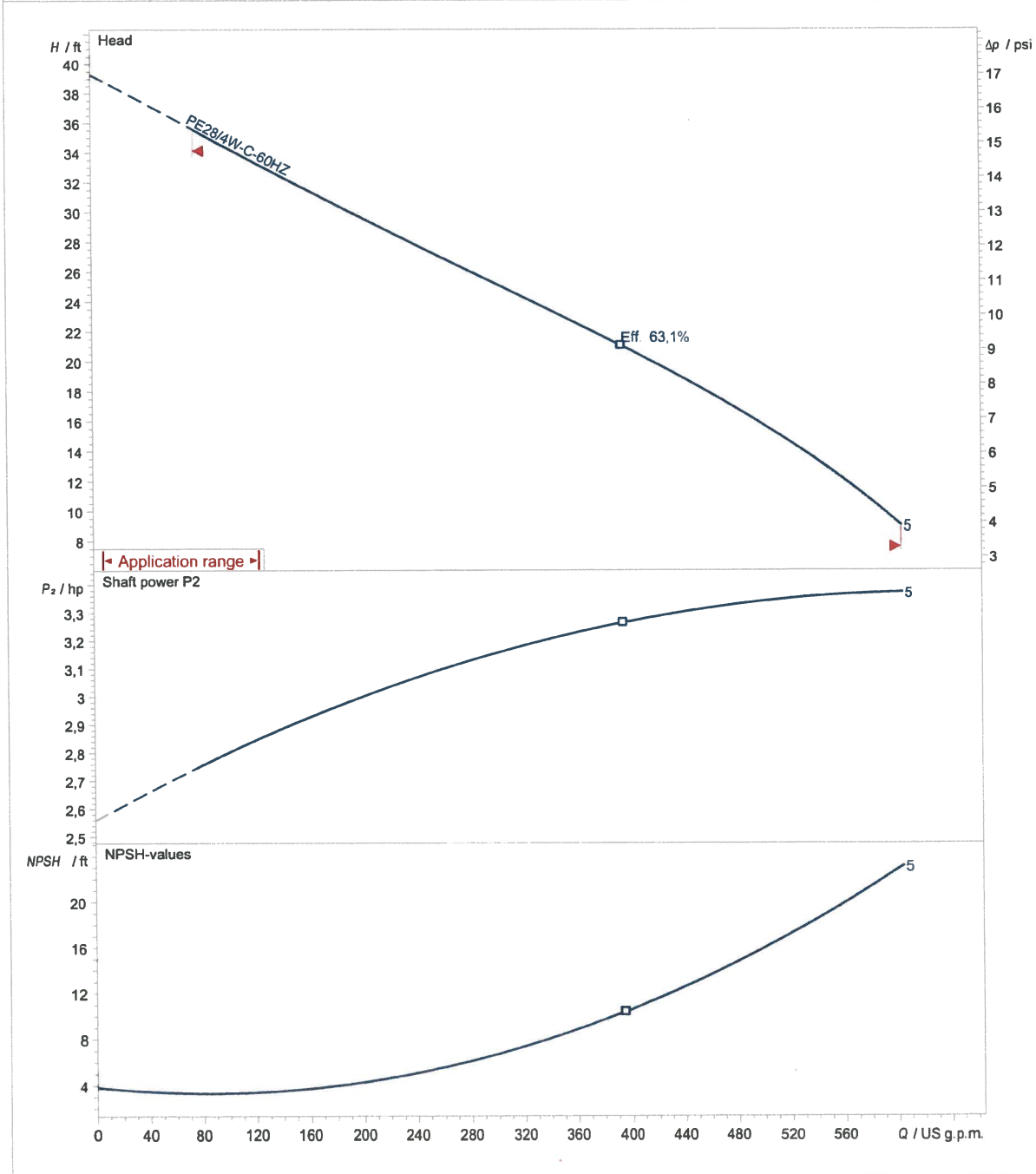
Sulzer reserves the right to change any data and dimensions without prior notice and can not be held responsible for the use of information contained in this software.

Version 2015/07/30
Data version Jul-2015

Curve number	Pump performance curves
Reference curve XFP100C-CB SINGLE PHASE 60Hz	



Density 62,32 lb/ft ³	Viscosity 1,005 mm ² /s	Testnorm ISO 9906: 2012, HI 11.6/14.6 ≤10kV	Discharge DN100	Frequency 60 Hz
Flow	Head	Rated power	Rated speed 1750 rpm	Date 8/24/2015
			Hydraulic efficiency	NPSH



Impeller size 6,69 inch	N° of vanes 1	Impeller Contrablock Plus impeller, 1 vane	Solid size 3 inch	Revision
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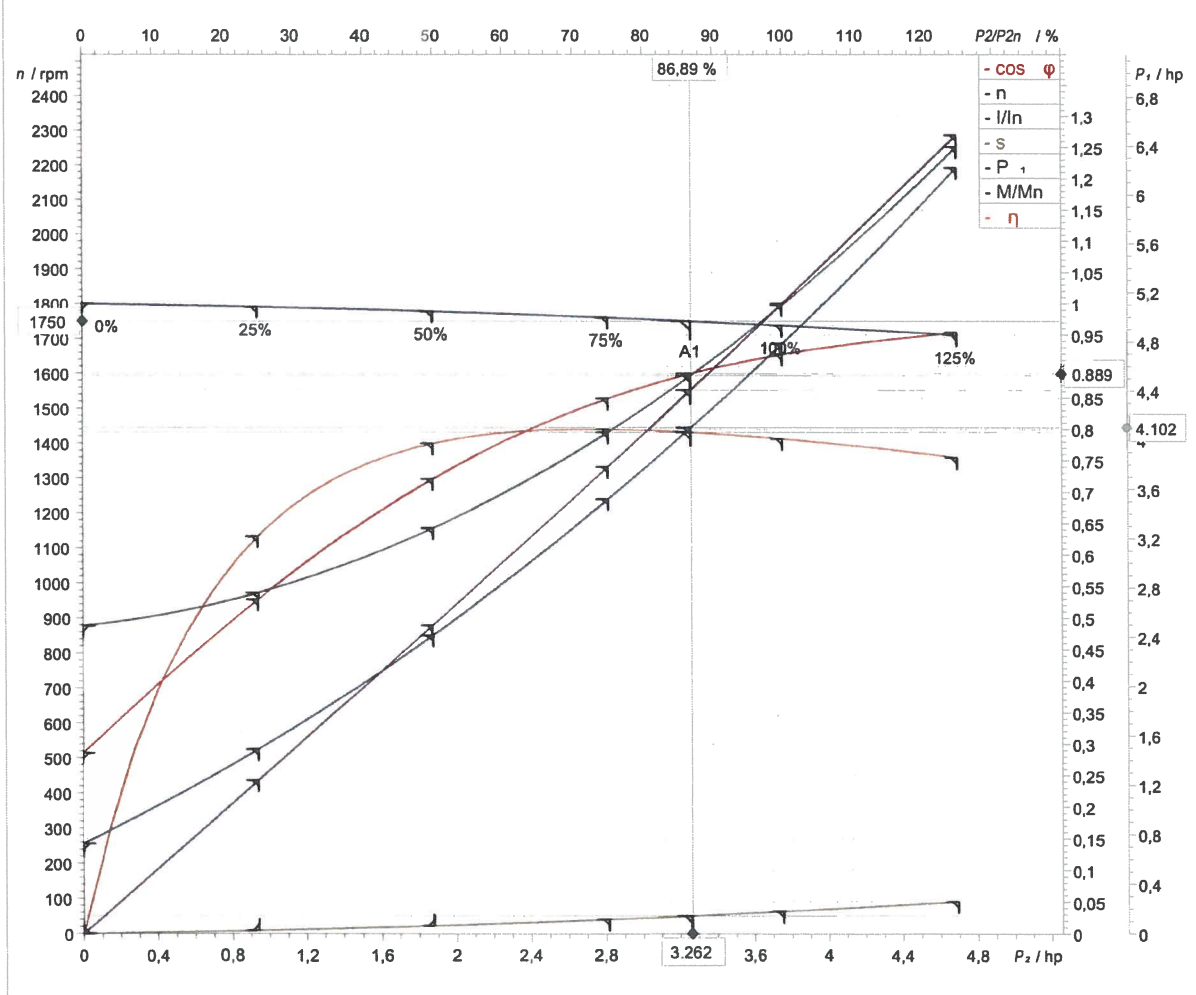
Frequency
60 Hz

Motor performance curve

PE28/4W-C-60HZ

SULZER

Rated power 3,75 hp	Service factor 1	Nominal Speed 1740 rpm	Number of poles 4	Rated voltage 230 V	Date 8/24/2015
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Symbol	No load	25 %	50 %	75 %	100 %	125 %
P_z / hp	0	0,9387	1,877	2,816	3,755	4,694
P_1 / hp	0,7266	1,491	2,415	3,52	4,784	6,221
η / %	0	62,95	77,75	80,01	78,48	75,45
n / rpm	1800	1791	1778	1760	1737	1710
$\cos \phi$	0,2859	0,5295	0,7209	0,8491	0,9195	0,9541
I / A	8,24	9,13	10,86	13,44	16,87	21,14
s / %	0	0,5	1,222	2,222	3,5	5
M / lbf ft	0	2,753	5,546	8,404	11,35	14,42

Tolerance according to VDE 0530 T1 12.84 for rated power

Starting current 68,8 A	Starting torque 17,6 lbf ft	Moment of inertia 0,0712 lb ft ²	No. starts per hour 15
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Sulzer reserves the right to change any data and dimensions without prior notice and can not be held responsible for the use of information contained in this software.

Version 2015/07/30
Data version Jul-2015

Bid Item No. 18

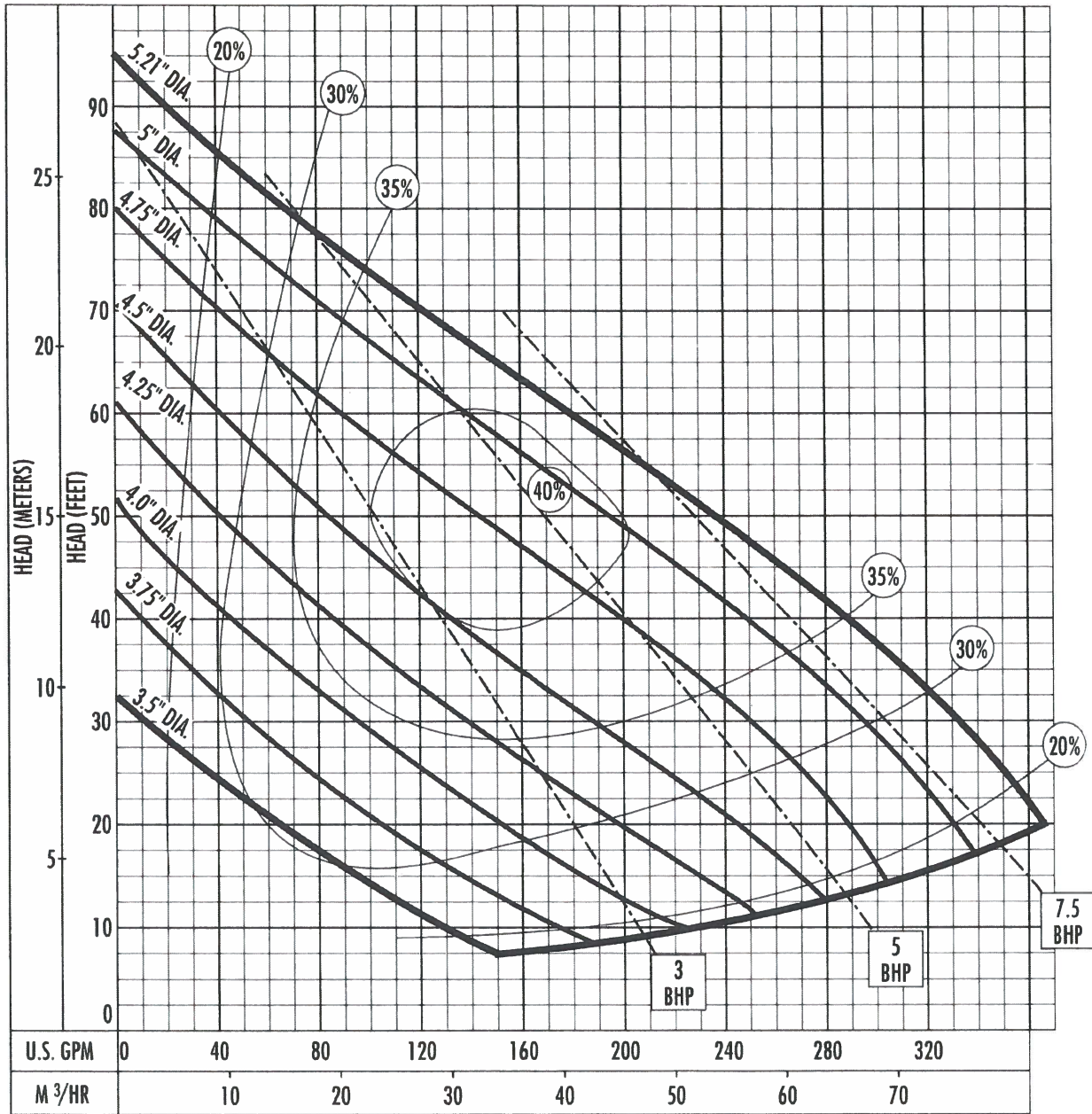
Existing Pump Info

Make	Hydromatic
Horsepower	5
Model No.	3HRC500M3-250
Serial No.	168236
Phase	3
Volts	230
Speed (RPM)	3450
Discharge Size	3"
Max Solid Size	2"
Impeller Size	4.5"

Proposed replacement pumps must match existing pump & motor characteristics including HP, phase / voltage, discharge size, impeller size, etc... and must operate within the existing pump performance curve (attached) as closely as possible. It is FGUA's intent to replace the existing pumps with pumps of similar performance and to not alter the hydraulics of the existing transmission system.

Performance Curve – S3HRC/S3HVX

RPM: 3450 DISCHARGE: 3" SOLIDS: 2"



The curves reflect maximum performance characteristics without exceeding full load (Nameplate) horsepower. All pumps have a service factor of 1.2. Operation is recommended in the bounded area with operational point within the curve limit. Performance curves are based on actual tests with clear water at 70° F. and 1280 feet site elevation.

Conditions of Service:



PENTAIR

HYDROMATIC*

GPM: _____ TDH: _____

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