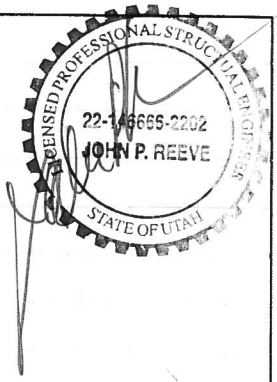
REEVE & ASSOCIATES, INC.
3670 Quincy Ave., Suite #1
Ogden, Utah 84403
(801) 621-3100 • FAX (801) 621-2666

JOB EDGEWATER BEACH RESORT
SHEET NO. 1 OF
CALCULATED BY JPR DATE 11/12/13
CHECKED BY DATE



PROJECT LIFT STATION

DESIGN FLOWS

5300 SF Commercial	2400	gpd
3 - 3Plex Cottages	3600	"
8 - Duplex Cottages	6400	"
28 - Single Family Cottages	11,200	"
44 - Lots @ Chalets In Ski Lake	17,600	"
1 - Existing 4 Plex	1,600	"
Total	42,800	gpd.

Average Flow 42,800/1440 = 29.7 gpm

Peak Flow 4 x 29.7 = 118.9 use 120 gpm

WET WELL DESIGN

6' Dia. Manhole and 9' Below Alarm
$3^2 \times 3.1416 \times 9 \times 7.48 = 1903$ Gallons

Cycling Rate of Pumps on Average 23 Times per Day. Pump time for 1903 Gallons is 16 min.

Duplex Pumping System is Capable of Pumping 240 gpm with Both Pumps Operating.

Wet Well Size to avoid heat build up in pumps (frequent starting) and septic condition due to excessive detention time.

Reserve Storage Tank is designed for 6,000 Gallons

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JOB EDGEWATER BEACH RESORT
SHEET NO. 2 OF
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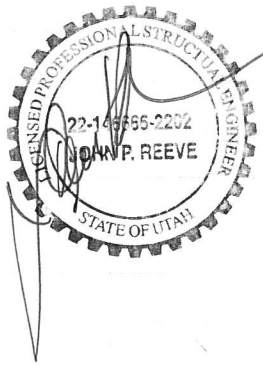
DUPLEX LIFT STATION



Rated Capacity: 120 GPM
Rated Head: 124 Ft.
Electrical Service: 480 V 3 Phase
Wet Well Size: 6' Dia x 18' Deep Basin

GRP 79/3 10 HP Submersible Grinder Pump, HOMA
2" Flg. Auto Couplings
UGBB #8732305, T-304
3/16" Lifting Chains, SST
1½" Dia. x 18' Guide Rails, SST T-304, to fit the Flygt system
Duplex Control Panel, Complete w/ Red High Level Alarm Light & Horn, Seal Fail Panel Lights, Alternator, NEMA 3R Enclosure
GSE 30NO Float Controls, 30'
Float Control Bracket, SST-304
C2Q Aluminum Access Door, 300 lb. Load Rating
6' Dia x 18' Deep Conc. Basin
4" DI Sch 50 Pipe & Fittings
4" Flg. Check Valve
4" Flg. Gate Valve
4" Galvanized Steel 'J' Vent

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JOB EDGEWATER BEACH RESORT
SHEET NO. 3 OF
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PUMP SIZING

120 gpm Pump Capacity w/ 115 feet elevation head (5025 - 4910) and 9 feet friction lost (3 per 1000' of 6" pipe).

$$hp = \frac{120 \times 124}{3900} = 3.8$$

$$b.hp = 3.8/.45 = 8.5$$

Use a HOMA Electric Submersible Wastewater Pumps. Barracuda GRP 79/3 10 hp

Pump set GRP 79/3 w/ Flygt brand slide rail System (with stainless steel rails)

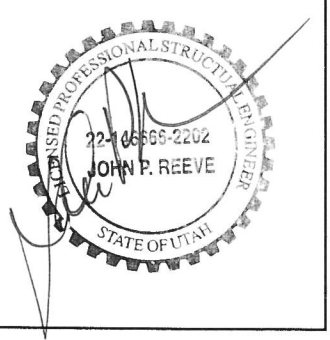
Electrical requirements
480 Volt, 3 Phase power supply 100 to 150 amp service

3450 rpm, 60 Hz,

GENERATOR

Generac QuietSource Series (or equal)
Min. 20 kW Standby Power
277/480V, 3 Phase

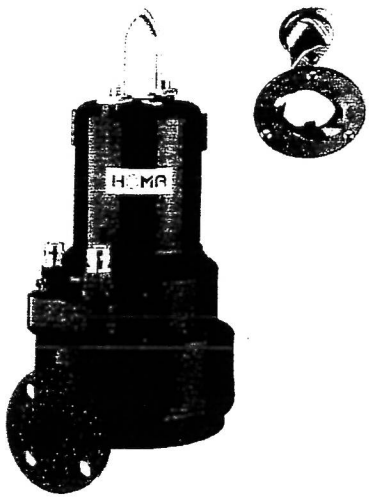
Fuel Type: LP/Natural Gas



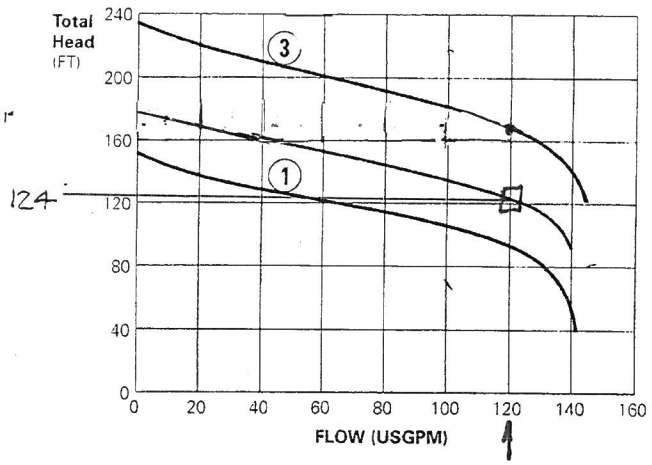
HOMA
PUMP TECHNOLOGY

Electric Submersible Wastewater Pumps with Cutter System 2" Discharge

Barracuda GRP 59–118



Performance



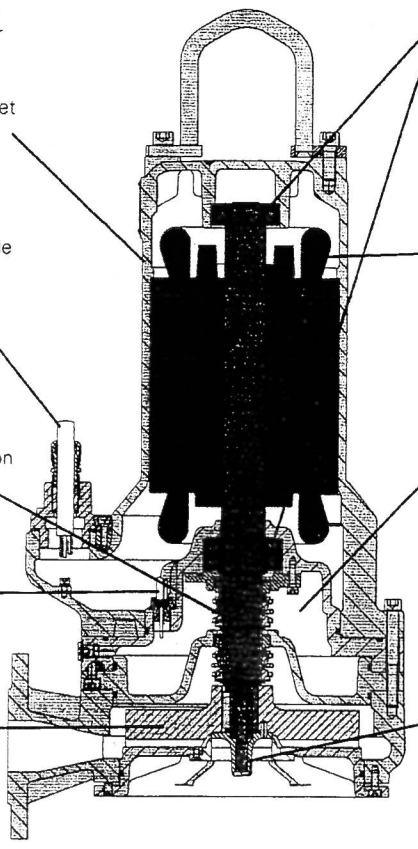
Application

HOMA Barracuda GRP Grinder Pumps are designed for high-head pumping applications of waste water and sewage. Their hard stainless steel cutter system grinds all soft solids to small pieces, enabling the pumps to provide high pressure pumping at low motor rating. It also allows the use of cost saving small diameter pipework.

The Barracuda GRP 59 – GRP 118 series pumps are typically used in:

- Commercial wastewater and sewage
- Small municipal collection systems
- Waste treatment plants
- Industrial wastewater
- Effluent distribution systems
- Agricultural wastewater
- Processing plants
- Optional Factory Mutual (FM) label for Class I, Div 1 EX construction.

Features



Cast iron construction with epoxy coating for maximum corrosion resistance. All models are available with jacket cooling for dry well installation or not fully submerged operation

Extra Long Replaceable power cable of 33' length is retained and sealed with a strain relif gland

Combination of two mechanical seals (Silicon Carbide / Silicon Carbide)

Seal leakage probe in motorhousing and oil chamber

Open multi-channel impeller for smooth vibration free operation

Single grooved upper and double row angular lower ball bearings assure long life and reliability

Motor windings provided with class F insulation and fully protected by embedded auto reset thermal switches

Oil filled seal chamber positively lubricates seals

55 HRC hardened stainless steel cutter steel cutter system consisting of stationary cutter ring and blade rotor

Performance Curve

GRP79/3

HOMA PUMPEN MIT SYSTEM

Impeller

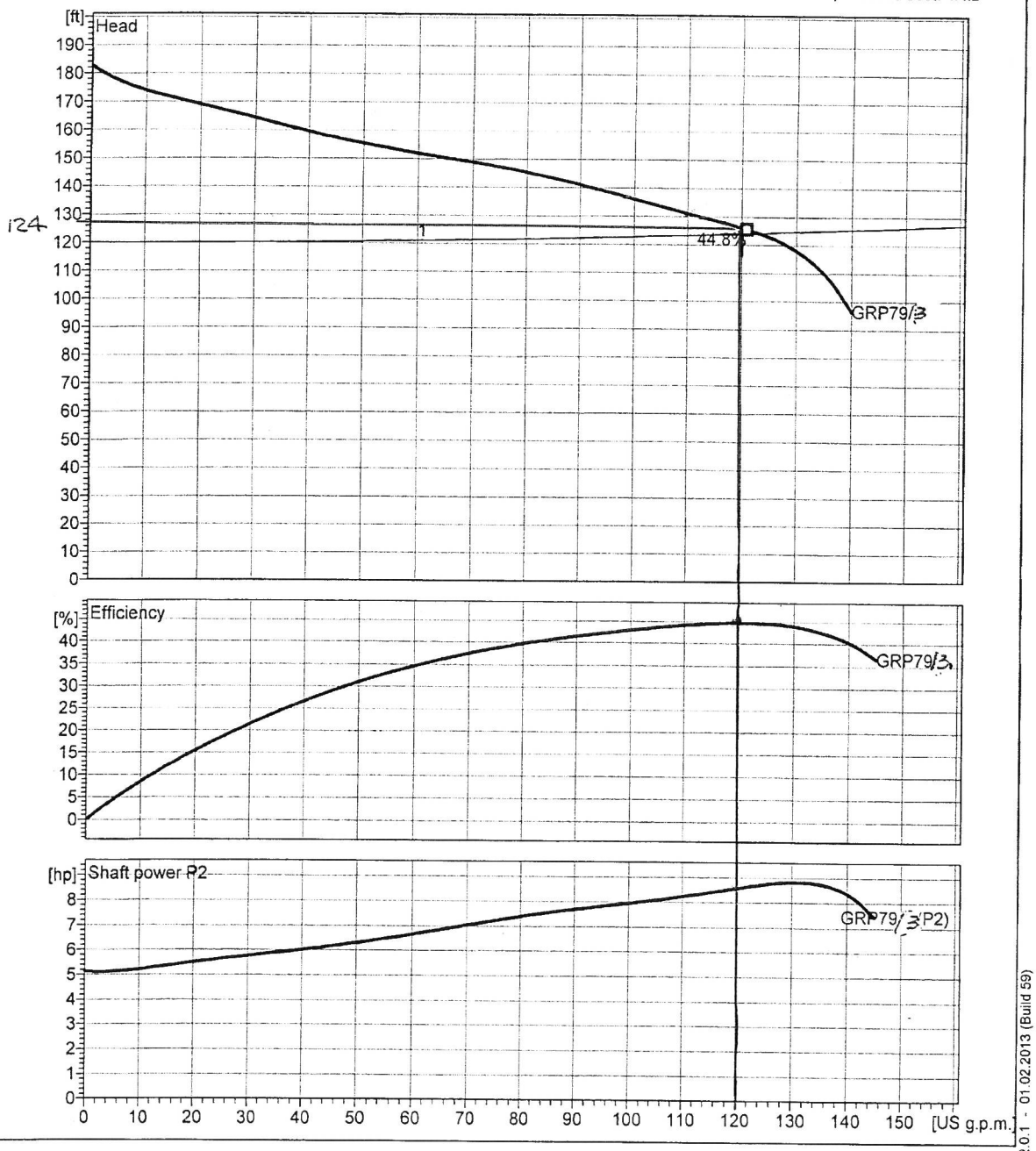
Impeller type:	Solid size Ø:	Max. Ø:	Min. Ø:	Sel. Ø:
Vane impeller with cutter sys.		7 11/16"	6 1/8"	6 11/16"

Operating data

Speed:	Frequency:	Duty point:	Shaft power P2:	Discharge port:
3450 rpm ✓	60 Hz	Q = 120 US g.p.m. H = 124 ft	8.69 hp	2" ANSI

Power data referred to: Water [100%] ; 68°F; 62.322lb/ft³; 1.0818E-5ft²/s

Testnorm: P2>10kW, ISO9906 Grade 2B
P2<10kW, ISO9906 Sect. 4.4.2



2.0.1 - 01.02.2013 (Build 59)

Project	Project no.:	Created by:	Page: 2	Date: 2013-10-02

Dimensions

GRP79/3

Nassaufstellung mit Kupplungssystem
:tters see table

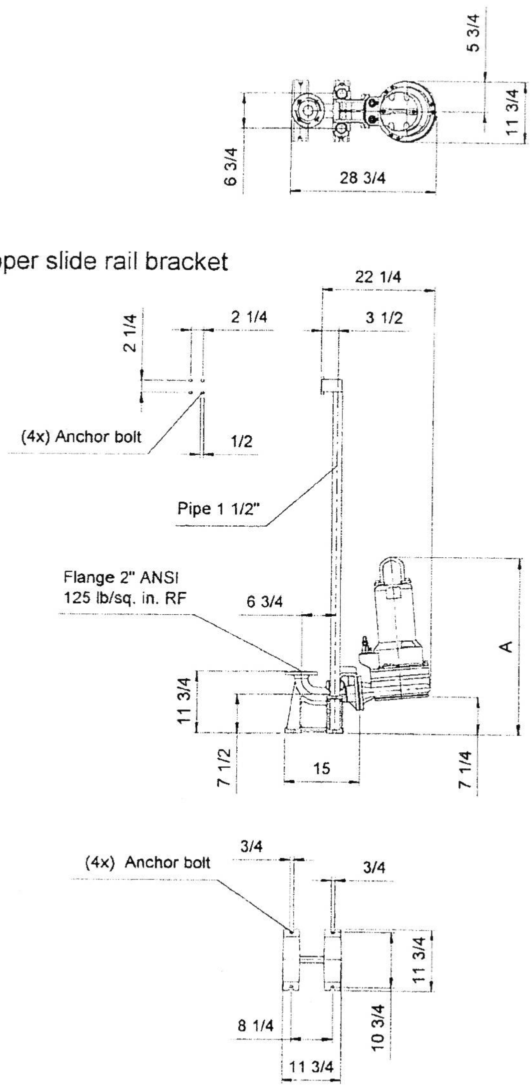


Table Dimensions (inch)

2.0.1 - 01.02.2013 (Build 59)

Technical Data

GRP79/3

HOMA
PUMPEN MIT SYSTEM

Operating data					
Flow	**120**	**US g.p.m.**	**Head**	**124**	**ft**
Shaft power P2	**8.7**	**hp**	**Static head**	**120**	**ft**
Pump efficiency	**44.7**	**%**	**Required pump NPSH**		**ft**
Pumpe type	Single pump		No. of pumps	2	
Fluid	Water		Temperature	68	°F
Density	62.32	lb/ft³	Kin. viscosity	1.082E-5	ft²/s

Pump					
Pump Code	GRP79/1		Speed	3450	rpm
Suction port			Head Max.	182.9	ft
Discharge port	2" ANSI		Head Min.	96.5	ft
Impeller type	Vane impeller with cutter sys.		Flow Max.	140.0	US g.p.m.
Solid size		inch	Pump efficiency max.	44.8	%
Impeller Ø	6.69	inch	Required rated power max. P2	8.8	hp

Motor					
Motor design	Submersible motor		Insulation class	H	
Motor name	AM173.14,3T/2/1		Degree of protection	IP 68	
Frequency	60	Hz	Temperature class	T3C	
Rated power P1	14.3	hp	Ex		
Rated power P2	12.6	hp	Explosion protection		
Rated speed	3450 ✓	rpm	Efficiency at % rated power 100%	88	%
Rated voltage	230 V 1~		Efficiency at % rated power 75%		%
Rated current	44.8	A	Efficiency at % rated power 50%		%
Starting current, direct starting	0.0	A	cos phi at % rated power 100%	0.99	
Starting current, star-delta		A	cos phi at % rated power 75%		
Starting mode	Directly		cos phi at % rated power 50%		
Power cable	4G10		Control cable	5G1,5	
Type of power cable	H07RN-F PLUS		Type of control cable	H07RN-F	
Cable length	32.809 ft		Service factor	1.15	
Shaft seal	Mechanical seal on motor side		SiC / SiC		
	Mechanical seal on medium side		SiC / SiC		
Bearing	Lower Bearing		Double row angular ball bearing		
	Upper Bearing		Deep Groove Ball Bearing		
Remarks	Start-/ Runcapacitor: 350µF / 120µF				

Materials / Weight			
Motor housing	Cast Iron ASTM A48;Cl.40B	Bolts	AISI 304 Stainless Steel
Pump housing	Cast Iron ASTM A48;Cl.40B	Elastomeres	Nitrile Rubber
Impeller	Cast Iron ASTM A48;Cl.40B		
Cutting system	Hardened Stainless Stell HRC55		
Motor shaft	AISI 430 F Stainless Steel		
Weight aggregat	On demand lb		

2.0.1 - 01.02.2013 (Build 59)

Technical Information

GRP79/3

HOMA PUMPEN MIT SYSTEM

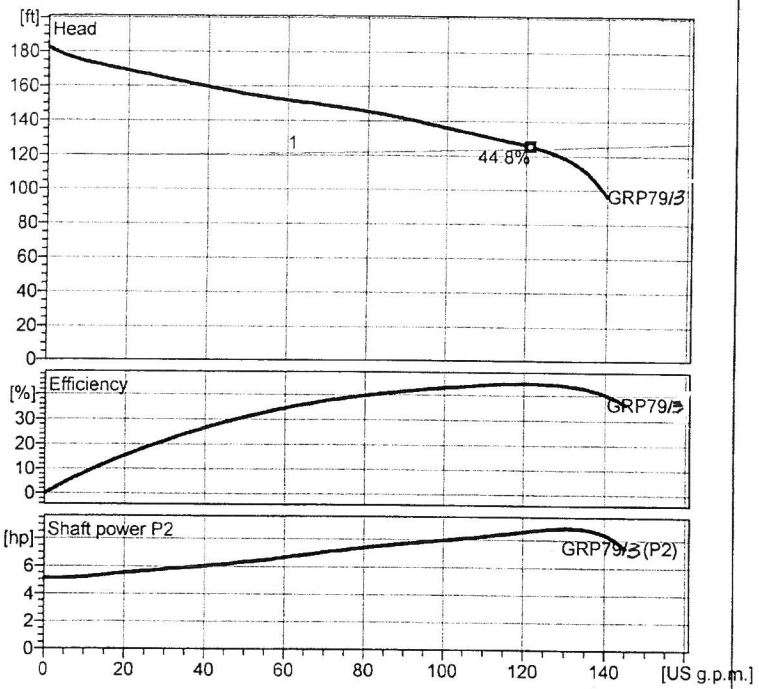
Operating data	
Flow	120 US g.p.m.
Head	124 ft
Shaft power P2	8.69 hp
Pump efficiency	44.7 %
Required pump NPSH	
Pumpe type	Single pump
No. of pumps	2
Fluid	Water

Pump	
Pump Code	GRP79/3
Impeller	Vane impeller with cutter sys.
Impeller size	$6^{11}/_{16}$"
Solid size	
Discharge port	2" ANSI
Suction port	

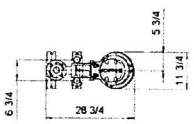
Motor		
Rated voltage	230	V
Frequency		60 Hz
Rated power P2		12.6 hp
Rated speed		3450 rpm
Number of poles		2
Efficiency		88 %
Rated current	44.8	A
Degree of protection		IP 68

Materials	
Motor housing	Cast Iron ASTM A48;Cl.40B
Impeller	Cast Iron ASTM A48;Cl.40B
Pump housing	Cast Iron ASTM A48;Cl.40B
Cutting system	Hardened Stainless Stell HRC55
Motor shaft	AISI 430 F Stainless Steel
Bolts	AISI 304 Stainless Steel
Elastomeres	Nitrile Rubber
Mechanical seal on motor side	SiC / SiC
Mechanical seal on medium side	SiC / SiC
Lower Bearing	Double row angular ball bearing
Upper Bearing	Deep Groove Ball Bearing

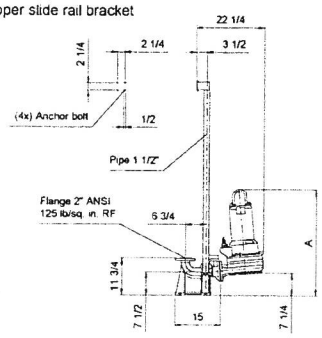
Testnorm: P2>10kW, ISO9906 Grade 2B
P2<10kW, ISO9906 Sect. 4.4.2



Nassaufstellung mit Kupplungssystem
Dimensions in inch, letters see table



Upper slide rail bracket



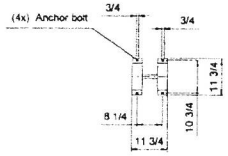


Table Dimensions
(inch)

2.0.1 - 01.02.2013 (Build 59)

Project	Project no..	Created by:	Page: 1	Date: 2013-10-02

Guide Specifications – Underground Onsite Wastewater Tanks

Short form

The contractor shall provide a single-wall or double-wall, fiberglass reinforced plastic (FRP) water storage tank as shown on the drawings. The onsite wastewater tank shall be manufactured according to applicable American National Standards Insititute (ANSI) and American Water Works Association (AWWA) standards. The tank size, fittings and accessories shall be as shown on the drawings. The fiberglass water tank shall be manufactured by Xerxes Corporation.

The tank shall be designed for underground installation, and shall be tested and installed according to the Xerxes Installation Manual and Operating Guidelines for Fiberglass Underground Storage Tanks in effect at the time of installation.

Long form

Part I: General

1.01 Quality Assurance

A. Acceptable Manufacturer: Xerxes Corporation

B. Governing Standards, as applicable:

1. ANSI/AWWA D120-09: Thermosetting Fiberglass-Reinforced Plastic Tanks.
2. Tank manufacturer shall be recognized by Underwriters Laboratories (UL) as a manufacturer of tanks listed to the UL-1316 standard.
3. American Concrete Institute (ACI) standard ACI 318-11, Building Code Requirements for Structural Concrete.

C. Submittals

1. The manufacturer shall supply scaled drawings, product brochures and manufacturers Installation Manual and Operating Guidelines.

Part II: Products

2.01 Single-Wall and Double-Wall Fiberglass Reinforced Plastic (FRP) Underground Onsite Wastewater Tanks

A. Loading Conditions – Tank shall meet the following design criteria:

1. **Internal Load** — Tank shall be designed to withstand a 5-psig air-pressure test with a 5:1 safety factor.
2. **Surface Loads** — Tank shall be designed to withstand surface H-20 and HS-20 axle loads when properly installed according to manufacturer's current Installation Manual and Operating Guidelines.
3. **External Hydrostatic Pressure for Underground Water Tank** —Tank shall be designed for 7 feet of overburden over the top of the tank, the hole fully flooded, and a safety factor of 5:1 against general buckling.

B. Product Storage

1. Tank shall be vented to atmospheric pressure.
2. Tank shall be capable of handling liquids with specific gravity up to 1.1.
3. Tank shall be compatible with liquids identified in the manufacturer's standard limited warranty.

C. Materials

1. Tank shall be manufactured with a laminate consisting of resin and glass fiber reinforcement. No sand/silica fillers or resin extenders shall be used.
2. All internal mounting hardware shall be manufactured of rustproof materials.

D. Design

1. The tank shall be designed as a single-wall or double-wall vessel as specified and shown in the drawings.
2. Tank shall be manufactured with structural ribs which are fabricated as in integral part of the tank wall.

E. Capacity and Dimensions

1. Tank shall have nominal capacity of _____ .
2. Tank shall have nominal outside diameter of _____ .

F. Interstitial Space (Double-Wall Tanks only)

1. The interstitial space between the primary and secondary walls shall be constructed with a glass reinforcement material such as Parabeam®, which provides a structural bond between the two tank walls, wile creating a defined interstice that allows for free flow of liquid.
2. A tank top fitting shall be provided to allow for a monitoring sensor to be installed at the bottom of the interstice.
3. The double-wall tank design shall use Parabeam® glass fabric to create the interstitial space between the primary and secondary walls.
4. The interstice of the tank shall be designed to withstand 20 psig pressure.

2.02 Accessories

A. Access Openings

1. All access openings shall have a diameter of 24 inches or 30 inches, complete with riser, lid and necessary hardware.
2. Size and location(s) as shown on tank drawing.

B. Piping and Fittings

1. Tank shall be equipped with factory-installed threaded fittings, or pipe stubs.
2. PVC piping shall at a minimum meet the requirements of ANSI Schedule 40.
3. All flanged nozzles shall be flanged and flat-faced, and conform to Class 150 bolting patterns as specified in ANSI/ASME/ B16.5-2009.
4. Steel NPT fittings shall withstand a minimum of 150 foot-pounds of torque and 1,000 foot-pounds of bending, both with a 2:1 safety factor.
5. Location of fittings and piping shall be as shown on tank drawings.

C. Attached Access Risers

1. Attached access risers shall be PVC or FRP as supplied by tank manufacturer.
2. Attached access risers shall be a 24-inch or 30-inch-diameter
3. Access risers shall be attached to access openings during installation utilizing adhesive or FRP bonding kits as supplied by the tank manufacturer.

D. Manway Openings (optional)

1. Manway openings shall be flanged, 22" I.D. and complete with gaskets, bolts and steel cover as shown on tank drawings.
2. Manway openings shall be designed to withstand 5 psig test pressure with a 5:1 safety factor.

E. Ladders (optional)

1. Ladders shall be the standard FRP ladder as supplied by tank manufacturer.

F. Anchoring (optional)

1. Anchor straps shall be FRP anchor straps as supplied by tank manufacturer.
2. Number and location of straps shall be as shown on drawings.
3. Prefabricated concrete deadmen, which are designed to ACI Standard 318-11, shall be supplied by tank manufacturer.

Part III: Testing and Installation

3.01 Testing

A. Testing — Tank shall be tested according to Xerxes Installation Manual and Operating Guidelines for Fiberglass Underground Storage Tanks in effect at time of installation.

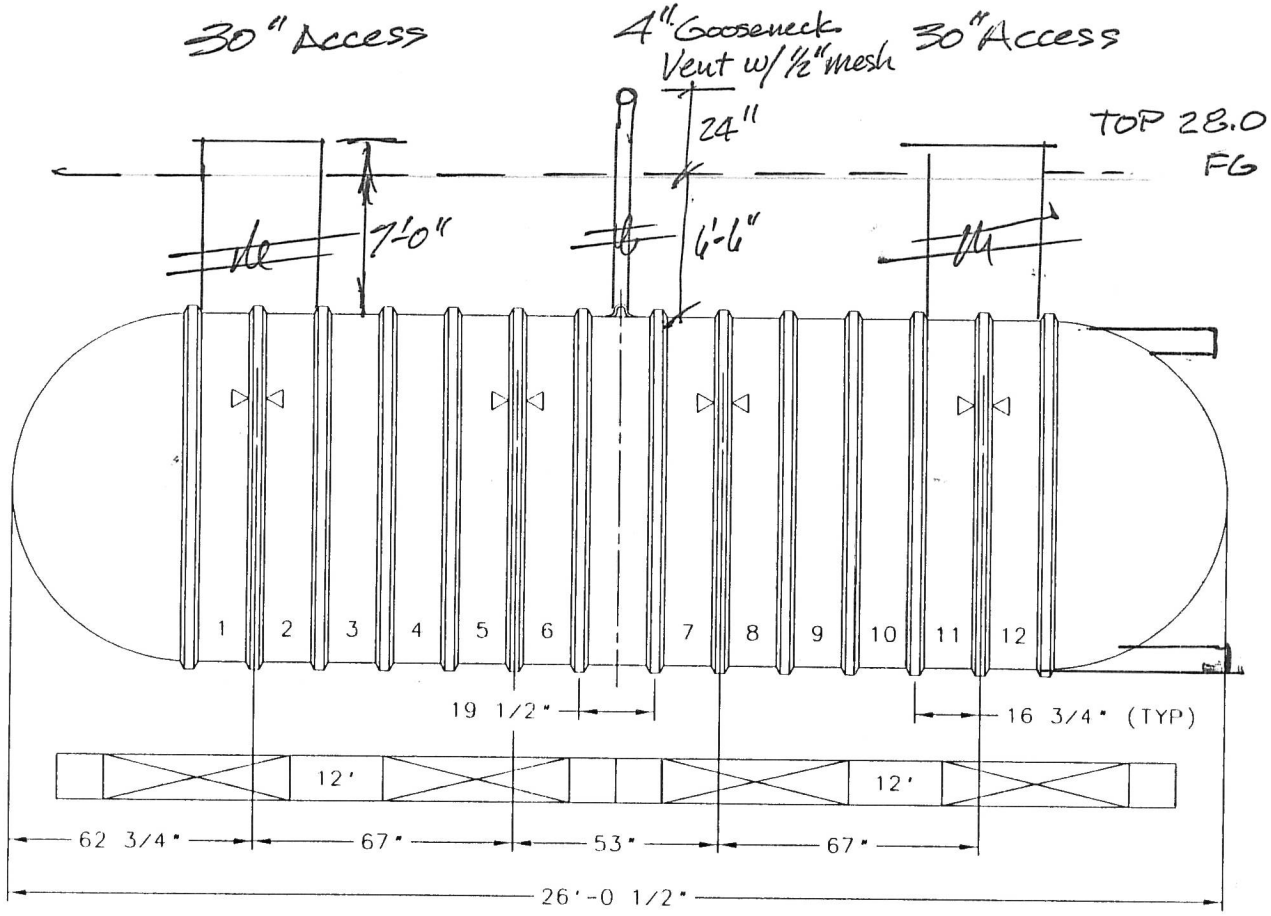
3.02 Installation

A. Installation — Tank shall be installed according to Xerxes Installation Manual and Operating Guidelines in effect at time of installation.

Part IV: Limited Warranty

4.01 Warranty

A. Limited Warranty — Warranty shall be the manufacturer's limited warranty in effect at the time of purchase.

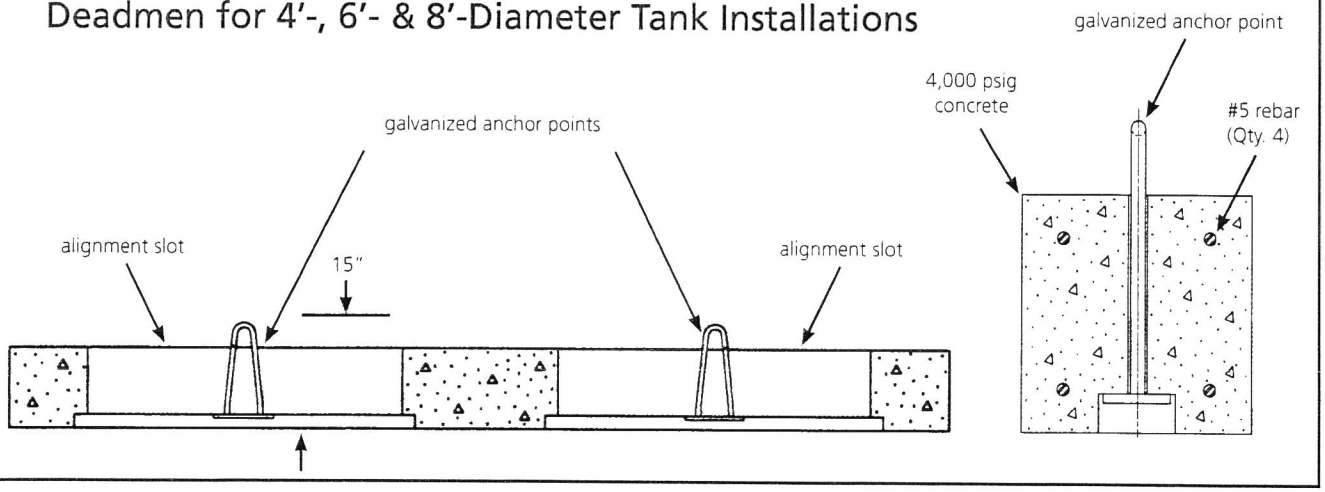


Optional prefabricated engineered concrete deadmen shown

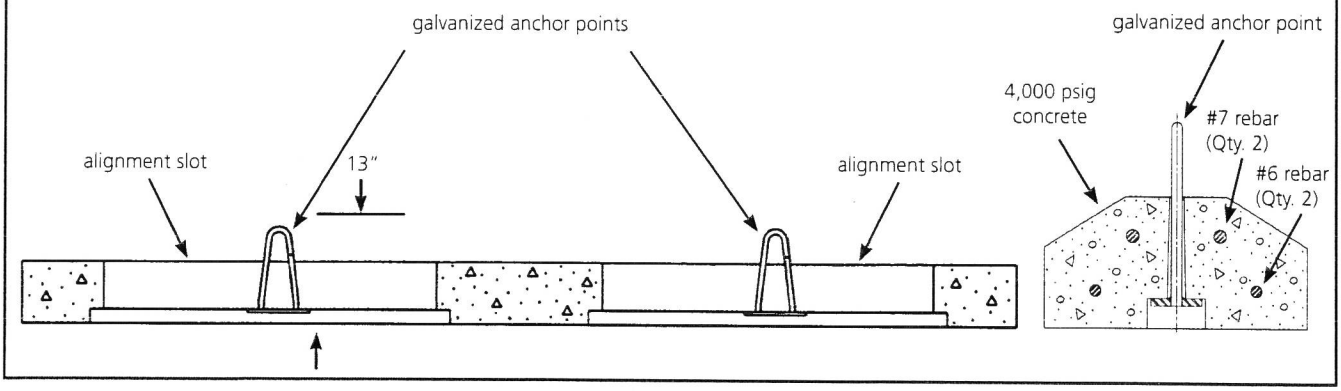
XERXES®
a ZCL company

TITLE	8' DIA. SINGLE-WALL CAP. 8,000 GALLONS
DATE 1-12	DR. NO. S10-875.03

Deadmen for 4′-, 6′- & 8′-Diameter Tank Installations



Deadmen for 10′- and limited 12′- Diameter Tank Installations



Product Specifications

Deadmen for 4′-, 6′- and 8′-Diameter Tanks		
Nominal length	Nominal width x depth	Approximate weight (lbs.)
12′	12″ x 12″	1,800
16′	12″ x 12″	2,400
18′	12″ x 12″	2,700

Deadmen for 10′- and 12′-Diameter Tanks		
Nominal length	Nominal width x depth	Approximate weight (lbs.)
14′	18″ x 8 3/4″	1,900
18′	18″ x 8 3/4″	2,400
22′	18″ x 8 3/4″	3,000
30′	18″ x 8 3/4″	5,000

Turnbuckles Jaw-to-Jaw Style
6′-Diameter Tanks 3/4″ x 9″ (17″ closed, expanding to 26″)
8′-Diameter Tanks 3/4″ x 12″ (20″ closed, expanding to 32″)
10′- and 12′-Diameter Tanks 3/4″ x 18″ (26″ closed, expanding to 44″)

General Notes:

1. Deadmen requirements may vary with tanks 25,000 gallons or larger, and/or based on the number of containment sumps, access risers and burial depth.
2. Consult the Xerxes Installation Manual and Operating Guidelines or your Xerxes sales representative for more information.

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952-887-1890 www.xerxes.com

making a **lasting** difference™

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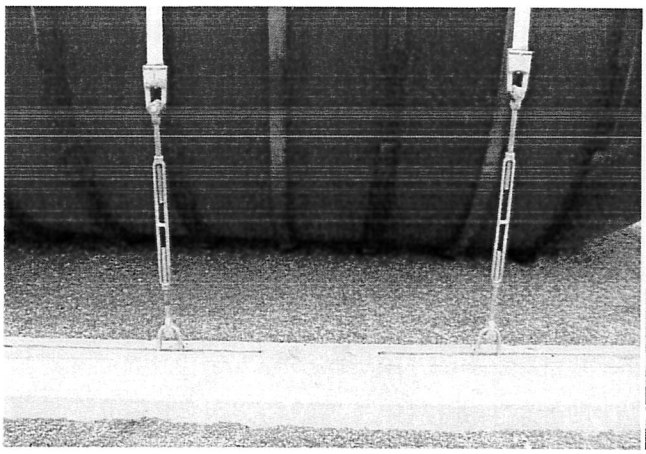
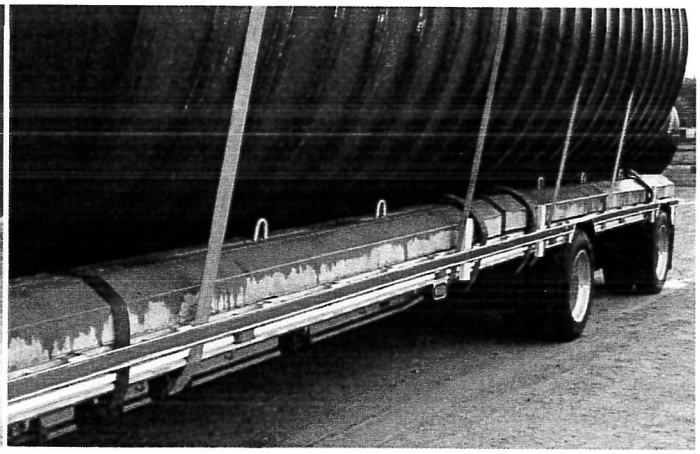
Tank Anchoring System

An engineered solution





Xerxes recognizes that the components of a tank anchoring system can be critical to a reliable, long-term tank installation. A large percentage of today's underground tank installations are anchored, whether site conditions mandate it or not. Use of inferior components, such as improperly designed or undersized concrete deadmen, can lead to disastrous results. As a solution, we designed and began supplying each of the components essential to proper tank anchoring, prefabricated deadmen, galvanized turnbuckles and extruded fiberglass hold-down straps. Providing a safe, dependable anchoring solution is not our only objective. The Xerxes anchoring package is also designed to provide installers with a quick, easy to install package of components that expedites the overall installation. The Xerxes tank anchoring system is yet another example of product innovations that Xerxes has been offering customers for more than three decades.

Consider the following features and benefits:

Flexible Design – Xerxes prefabricated deadmen were engineered with ease of shipping and installation in mind. With their unique and patented design, which incorporates adjustable galvanized steel anchor points, installers can properly align each anchor point and hold-down strap after the tank and deadmen have been set in place.

An Engineered Product – Tank installers and owners can have the confidence that prefabricated deadmen, an often overlooked yet critical component of an anchored tank installation, have been properly engineered and sized for each tank. Xerxes precast deadmen are fabricated to meet American Concrete Institute (ACI) design standards, which establishes such things as proper steel reinforcement, concrete psi specifications and adequate cure time.

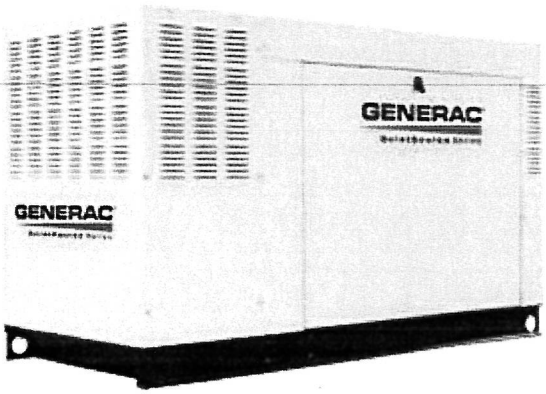
Transportation – An additional feature of Xerxes deadmen is that their geometry and dimensions allow them, in most cases, to be placed on the same shipping trailer as the tank. For installers, this means that the components of the anchoring system arrive with the tank, avoiding the potential for jobsite delays.

A Complete System – Combined, Xerxes supplied fiberglass hold-down straps, galvanized turnbuckles and prefabricated deadmen provide a complete anchoring package. With each component specifically designed and supplied by Xerxes, facility owners have the added peace-of-mind that in addition to having installed the industries' finest storage tank, they have also installed a reliable anchoring system.

Generac QuietSource QT03624KNAX - Series™ 36 kW Standby Power Generator (277/480V) (Premium-Grade)

Your Online Generac QuietSource Portable and Standby Generator Superstore.

Generac QuietSource Series™ 36 kW Star (277/480V) (Premium-Grade)



GENERAC QuietSource Series

Model: QT03624KNAX

NOT RATED

What's This?

Write a Review

Factory D

This Item Is Built T

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Features | Specs | Q&A | Reviews | Articles

Model	
Model Number:	QT03624KNAX
UPC:	696471600261
Manufacturer:	Generac QuietSource
Made in USA:	Yes

Engine

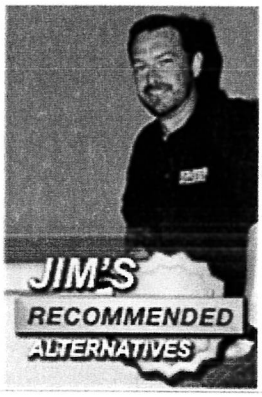
Brand:	Generac 2.4L 4-Cylinder
HP/CC:	62 HP
Consumer Engine Warranty:	2 Years
Commercial Engine Warranty:	2 Years
Engine RPM:	1800 RPM
Low Oil Alert/Shutdown:	Yes

Product Specs

Voltage	277/480 Three-Phase
Frequency:	60 Hertz
Cooling System	Liquid Cooled
Fuel Type	LP/Natural Gas
NG Power Capacity	35,000 Watts
LP Power Capacity	36,000 Watts
NG Consumption (50% Load)	282 ft³/hr (BTU: 282,000 BTU/HR)
LP Consumption (50% Load)	3.0 gallons/hr (BTU: 274,506 BTU/HR @ 6C
Rated Amps:	54 Amps @ 480 Volts (Three Phase)
Decibel Rating @ 7m:	58 Test (64 Run) db(A)
A/C Ton Rating	5-Tons
Enclosure	Aluminum
Mounting Pad	Concrete (Not Included)
Transfer Switch:	Automatic (Not Included)
Battery:	Not Included (525 CCA - Battery Group 2
UL Listed	Yes

Overview

Weight:	1271 Lbs. (576.53 kilograms)
Dimensions:	77L x 34W x 45H (195.58 x 86.36 x 114.30 cm)
Consumer Warranty:	2 Years
Commercial Warranty:	2 Years



Good

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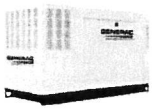

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John Reeve

Mitch Winegar

From: Pump Guy [utahpump@gmail.com]
Sent: Tuesday, November 12, 2013 1:06 PM
To: John Reeve
Subject: Lift station Mt. Sewer Co.
Attachments: ABS.pdf; Flygt.pdf; Homa.pdf

Hello John,

Good talking with you earlier. Attached, you will find performance curves for 1. Flygt, 2. Homa and 3. ABS pumps. The Flygt pumps are rated at 20 H.P., the ABS at 16 and the Homa at 10. The sewer company owns 2 of the Flygt pumps and 1 each of the Homa and the ABS. In addition, 2 new Homa pumps were purchased recently and are currently in service at the lift station. I don't have performance curves but they are very similar to the older Homa pump listed above with the exception they are smaller (6-7 HP I believe) and only deliver about 55 GPM. (I believe they were supplied by Mike Bachman Plumbing of Ogden.)

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There are several drawbacks to using single phase pumps, the greatest of which is longevity. Historically, larger (over 7.5 H.P.) 3 phase electric motors outlast their single phase counterparts about 3 to 1. Other possibilities include Phase Conversion and Variable Frequency Drive options (which incorporate phase conversion). These options allow for the use of larger 3 phase motors where 3 phase power is unavailable but are costly both initially and in the long run. The use of such power conversion options would probably negate the possibility of using any of the existing pumps as backups for the new lift station, whereas a 480 volt 3 phase 100 to 150 amp service would facilitate the use of any and all of the pumps available to the sewer company. Of course, the matter would require thorough investigation in order to make accurate determinations.

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I certainly hope this information is of value and would hope to make the system as cost efficient and dependable as possible for the sewer company and its valued customers.

Please call or email for further information or questions.

Sincerely,

Mitch Winegar

HOMA
PUMPEN MIT SYSTEM

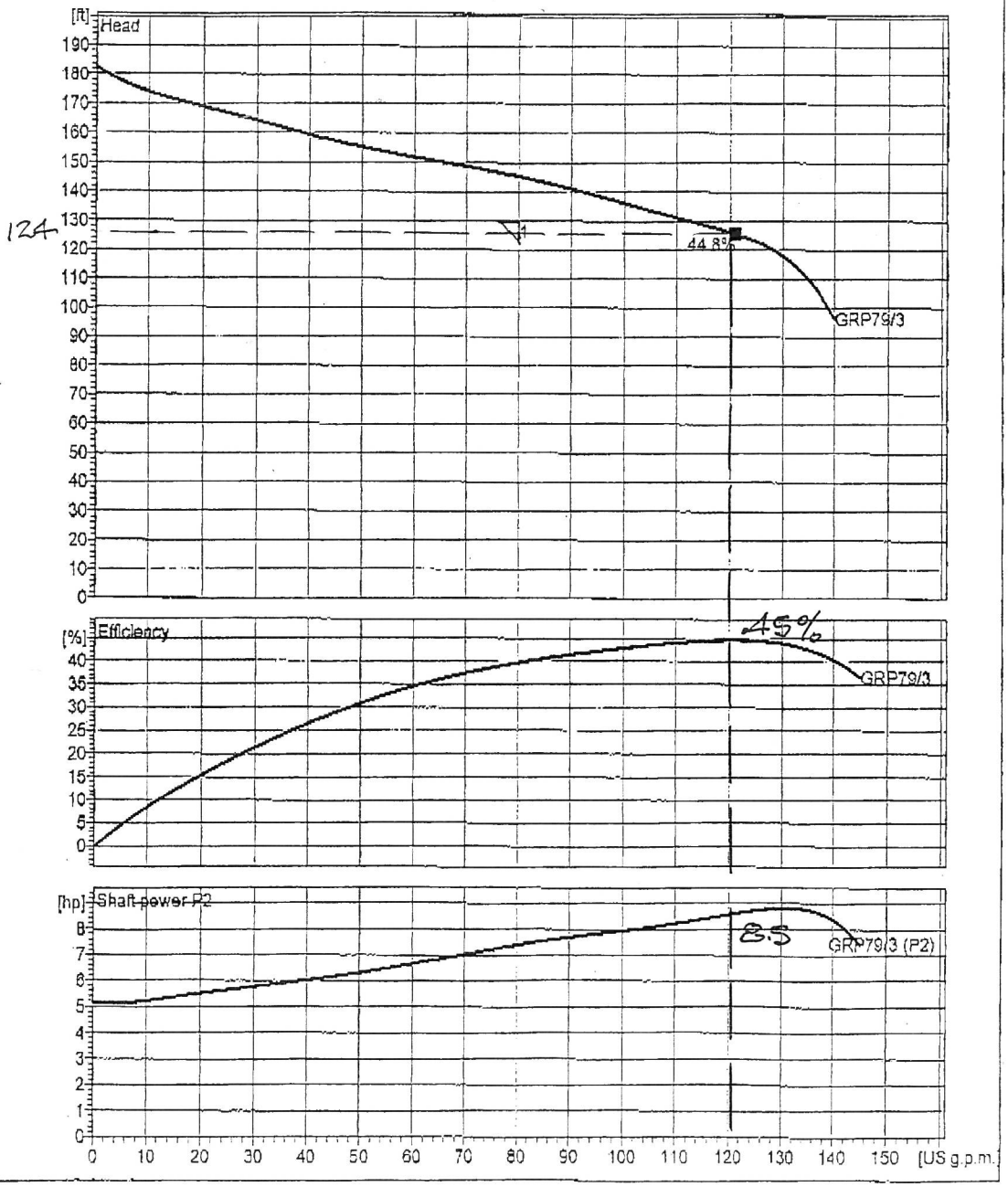
Performance Curve

GRP79/3

Impeller					
Impeller type: Vane impeller with cutter sys.	Solid size Ø:	Max. Ø: 7 11/16"	Min. Ø: 6 1/8"	Sel. Ø: 6 11/16"	

Operating data				
Speed: 3450 rpm	Frequency: 60 Hz	Duty point: Q = 80 US g.p.m. H = 130 ft	Shaft power P2: 7.53 hp	Discharge port: 2" ANSI

Power data referred to: Water [100%] ; 68°F; 62.322lb/ft³; 1.0818E-5ft²/s Testnorm: ISO 9906/A



Project	Project no.:	Created by:	Page: 2	Date: 2013-04-04

Generator
20 kw

PERFORMANCE CURVE

PRODUCT	CP3152.181
TYPE	HT
DATE	2004-10-20
PROJECT	
CURVE NO	63-454-00-5360
ISSUE	4

	1/1-LOAD	3/4-LOAD	1/2-LOAD
POWER FACTOR	0.84	0.79	0.69
EFFICIENCY	87.0 %	87.0 %	86.0 %
MOTOR DATA	—	—	—

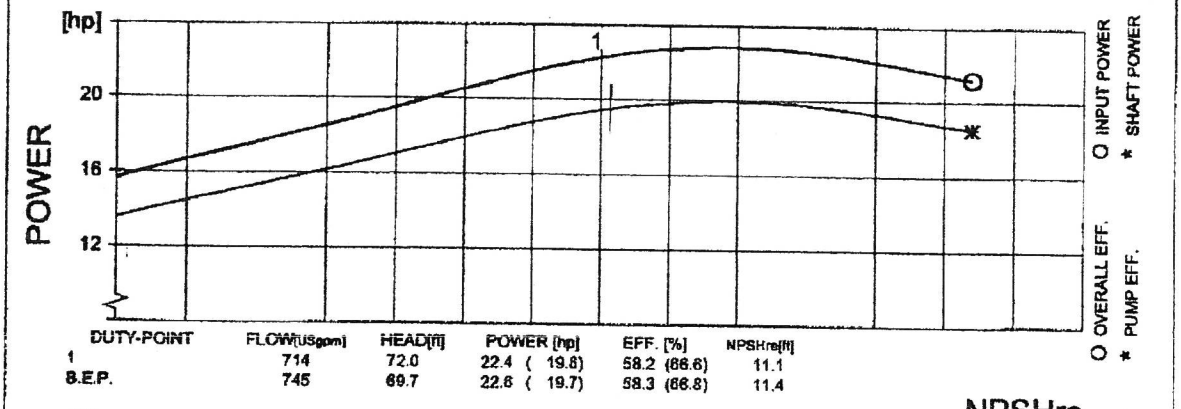
RATED POWER	20	hp
STARTING CURRENT ...	142	A
RATED CURRENT ...	26	A
RATED SPEED	1750	rpm
TOT.MOM.OF INERTIA ...	0.24	kgm2
NO. OF BLADES	1	

IMPELLER DIAMETER	275 mm
MOTOR #	25-15-4AA
STATOR	12YSER
REV	11
FREQ.	60 Hz
PHASES	3
VOLTAGE	460 V
POLES	4
GEARTYPE	---
RATIO	---

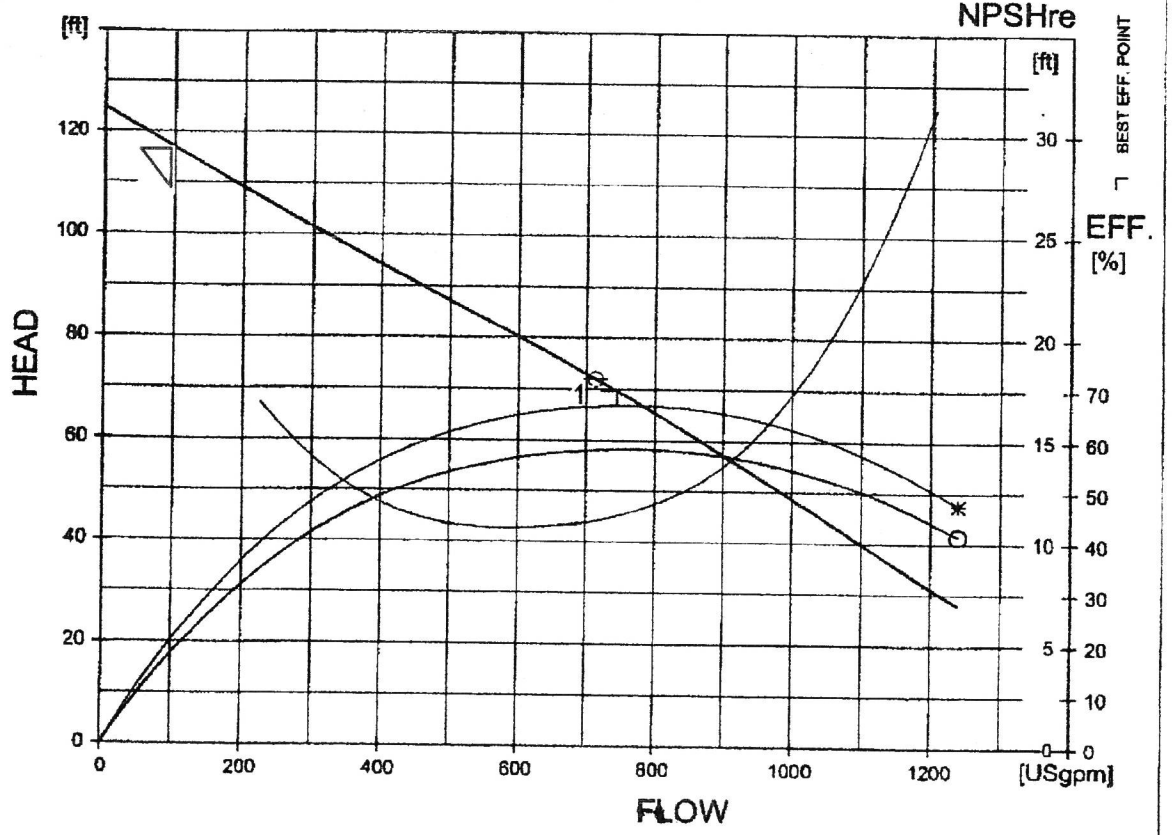
COMMENTS

INLET/OUTLET - /100 mm

IMP. THROUGHLET 76 mm



DUTY-POINT	FLOW[USgpm]	HEAD[ft]	POWER [hp]	EFF. [%]	NPSHre[ft]
1	714	72.0	22.4 (19.8)	58.2 (66.6)	11.1
B.E.P.	745	69.7	22.6 (19.7)	58.3 (66.8)	11.4



NPSHre = NPSH3% + min. operational margin

Performance with clear water and ambient temp 40 °C

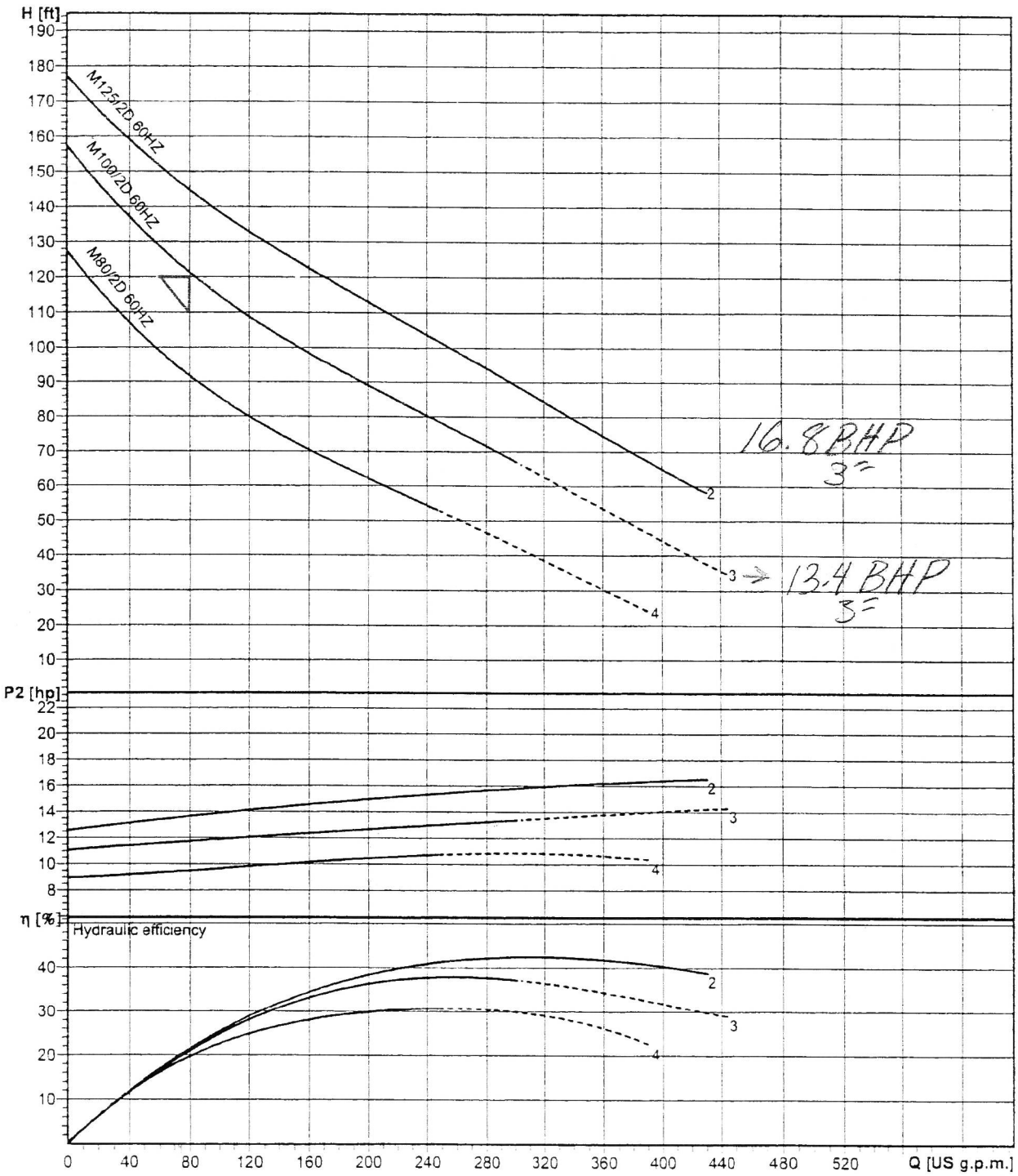
FLYPS2.19 (20021016)

CURVE

ABS
COST-EFFECTIVE PUMPING

Pump performance curves
AFP 0844 60 HZ

				Curve number
				Reference curve AFP 0844
			Discharge 3 inch	Frequency 60 Hz
Density 1 kg/dm³	Viscosity 0.000016813 ft²/s	Testnorm Hydraulic Institute	Rated speed 3470 rpm	Date 2004-05-20
Flow	Head	Rated power	Hydraulic efficiency	NPSH



Impeller size	N° of vanes	Impeller	Solid size	Revision	2002-12-10
170..150 mm	1	ContraBlock impeller, 1 vane	1.75 inch		

John Reeve

From: Pump Guy [utahpump@gmail.com]
Sent: Thursday, November 14, 2013 10:45 AM
To: John Reeve
Subject: Re: Lift station Mt. Sewer Co.

Hello John,
The (current version of the) Homa pump is available at a cost of 6321.00. This is for the pump only and will require adaptation for the slide rail system. Homa does not make a bolt-on adapter for the Flygt rail system so it will be a custom fit...which we have found is actually better as the slide flange needs to be custom faced to preclude leakage at the high discharge pressure. I would allow an extra 1,200 per pump for this adaptation. This price is for the 480 Volt Three Phase pump. If the Single Phase is chosen, the price will be higher and the voltage will necessarily be 240. The 240 Volt Single Phase service will also have to be commensurately upsized as the inrush amperage will nearly triple. The backup generator will also have to be sized accordingly. We will also lose the flexibility of interchangeability with the existing pumps, meaning, there will be no backup pump for these (single phase) pumps.

Also, typical availability is about 3 weeks depending on factory stock etc.

Please call if you have questions.

On Tue, Nov 12, 2013 at 1:05 PM, Pump Guy <utahpump@gmail.com> wrote:

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