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July 15, 2008

Mr. Steven L. Davis
Office of Public Health
Capital Region 2
7173-A Florida Blvd.
Baton Rouge, LA 70806
Phone # (225) 925-7230

RE: Village Lakes Subdivision Wastewater Pumping Station – Lots 1-147 Located in Village Lakes Subdivision (Single Family Residences)

Dear Mr. Davis,

With regards to subject letter, the following responses are provided:

1. A note has been added to the detail, Duplex Lift Station for 60k GPD Treatment Plant, that the contractor is to set the float elevation for 15 minute cycle time, approximately 5 ft depth per cycle.
2. The force main is now designed for a maximum velocity of 10 feet per second.
3. The detail, Duplex Lift Station for 60k GPD Treatment Plant, has been provided to show a 30-degree minimum slope to the hopper bottom.
4. The detail, Duplex Lift Station for 60k GPD Treatment Plant, has been provided which includes the provision for air displacement through an inverted "J" tube.
5. The detail, Duplex Lift Station for 60k GPD Treatment Plant, has been provided to show the top of the wet well is now at the elevation 55.1 feet.
6. The detail, Duplex Lift Station for 60k GPD Treatment Plant, has been provided which includes pumps, valves, appurtenances, and alarms in the same detail.
7. The detail, Duplex Lift Station for 60k GPD Treatment Plant, has been provided which includes the wet well access hatch size.
8. The detail, Duplex Lift Station for 60k GPD Treatment Plant, has been provided which includes a separate valve box from the wet well. Notes have been added to seal electrical connections as well as the valve box.
9. The detail, Duplex Lift Station for 60k GPD Treatment Plant, has been provided to show the new pump is submerged. Please see attached specifications for the new pump.
10. The above ground pump has been replaced with pumps inside the wet well; they deliver approximately 200 gpm at 25 ft of head. Please see attached specification for the new pump as well as a new Lift Station worksheet.

If you have any questions, please feel free to call.

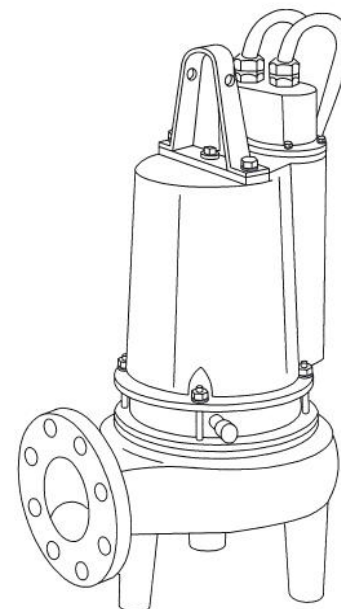
Emmett G. Dammon Jr.
PE 8796

LIFT STATION (S)

Project:	Village Lakes		
Engineer:	Emmet Dammon		
General Scope of Project:	Duplex lift station for a 60,000 GPD treatment plant		
PUMPS	# per Station:	2	
	Type:	Barns Submersible non-clog	Power: 2.8
	Capacity (GPM):	200	@ 25 TDH (FT)
	Pump Line Sizes and Type	Suction Line:	4"
		Discharge Line (3 inch min. diameter <u>without</u> grinder pumps; 1 ¼ inch min. diameter <u>with</u> grinder pumps):	4"
		Common Line:	4"
	Max. Solids Passage (in Inches):	3"	
Gate Valve on Suction <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Gate Valve and Check Valves on Discharge <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
WET WELL	Detention/Design flow (in minutes – 30 min maximum):	10 min	
	Pump Cycle Time:	11.5 min	
	Volume (low water to lead pump on):	470	
	Material:	Concrete	
	Diameter:	4'	
	Bottom Elevation:	34.27'	
	Invert of Influent:	44.91 for north and 36.29 for south	
	Floor Slope:	30 degrees	
	Access Cover Diameter:	n/a'	
	Vented and Screened <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
FORCE MAIN	Size (3 inch min. diameter <u>without</u> grinder pumps; 1 ¼ inch diameter <u>with</u> grinder pumps):	3"	
	Material (specify ASTM standard and standard dimension ratio-SDR):	Sch 40 PVC	
	Velocity (in fps – 2 fps minimum):	>2fps, under preasure	
Lift Station Cover Construction:	24"x36" Aluminum		
Alarm Systems:	Visual:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Telemetric: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Audio:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

4" Horizontal Discharge - Submersible Non-Clog Pumps

DISCHARGE	4" 125lb., Flange Horizontal
LIQUID TEMPERATURE	104°F (40°C) Continuous
VOLUTE	Cast Iron ASTM A-48, Class 30
MOTOR HOUSING	Cast Iron ASTM A-48, Class 30
SEAL PLATE	Cast Iron ASTM A-48, Class 30
IMPELLER:	
Design	2 Vane, Open with pump out vanes on back side, Dynamically Balanced, ISO G6.3
Material	Cast Iron ASTM A-48, Class 30
SHAFT	416 Stainless Steel
SQUARE RINGS	Buna-N
DIAPHRAGM	Buna-N
HARDWARE	300 Series Stainless Steel
PAINT	Air Dry Enamel
SEAL:	
Design	Double Mechanical, Oil filled pressure equalized reservoir
Material	Carbon/Ceramic/Buna-N
Hardware	300 Series Stainless
CORD ENTRY	40 ft. (12.1 m) Cord. Epoxy Sealed Housing with secondary pressure grommet for sealing and strain relief
SPEED	1150 or 1750 RPM (Nominal)
UPPER BEARING	Single Row, Ball, Oil Lubricated
Load	Radial
LOWER BEARING	Single Row, Ball, Oil Lubricated
Load	Radial & Thrust
MOTOR:	
Design	NEMA L- Single Phase, NEMA B - Three Phase Torque Curve, Oil Filled, Squirrel Cage Induction
Insulation	Class B
SINGLE PHASE	Permanent Split Capacitor (PSC) Includes Overload Protection in Motor
THREE PHASE	200-230/460 is Tri Voltage motor. Requires Overload Protection to be included in Control Panel
MOISTURE SENSOR	Normally Open (N/O), Requires relay in control panel
TEMPERATURE SENSOR	Normally Closed (N/C), Requires relay in control panel. For three phase units ONLY
OPTIONAL EQUIPMENT	Seal Material, Impeller Trims, Additional Cord



**Series: 4SE 1.9 & 2.8HP,
1150RPM, 60Hz**
**Series: 4SE 2.8, 3.7, 5.0HP,
1750RPM, 60Hz**



Sample Specifications: Section 1 Page 11.

DESCRIPTION:

SUBMERSIBLE NON-CLOG SEWAGE PUMP
DESIGNED FOR TYPICAL RAW SEWAGE
APPLICATIONS

Series 4SE-L

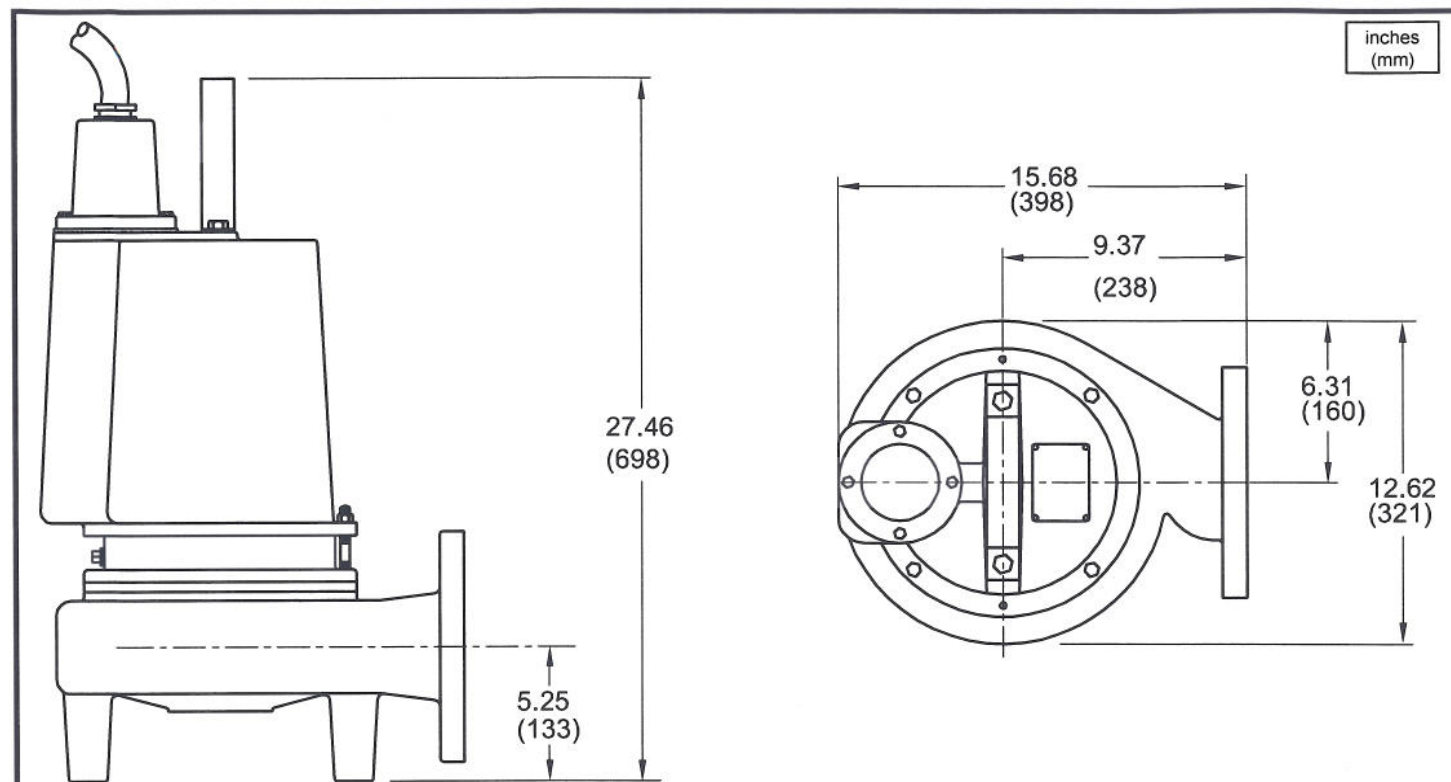
3" Spherical Solids Handling

Double Seal

BARNES®

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4" Horizontal Discharge - Submersible Non-Clog Pumps



MODEL NO	PART NO	HP	VOLT/PH	Hz	RPM (Nom)	NEMA START CODE	FULL LOAD AMPS	LOCKED ROTOR AMPS	CORD SIZE	CORD TYPE	CORD O.D inch (mm)
4SE1926L	084602	1.9	230/1	60	1150	D	8.3	35.0	10/3	SOW	0.690 (17.5)
4SE1996L	084604	1.9	200-230/3	60	1150	E/G	5.8/5.0	26.1/30.0	10/4	SOW	0.750 (19.1)
4SE1946L	084605	1.9	460/3	60	1150	G	2.5	15.0	10/4	SOW	0.750 (19.1)
4SE1956L	089300	1.9	575/3	60	1150	G	2.0	12.0	10/4	SOW	0.750 (19.1)
4SE2826L	088825	2.8	230/1	60	1150	A	13.5	31.0	10/3	SOW	0.690 (17.5)
4SE2896L	088826	2.8	200-230/3	60	1150	F/H	9.2/8.4	38.2/44.0	10/4	SOW	0.750 (19.1)
4SE2846L	088827	2.8	460/3	60	1150	H	4.2	22.0	10/4	SOW	0.750 (19.1)
4SE2856L	088828	2.8	575/3	60	1150	H	3.4	17.6	10/4	SOW	0.750 (19.1)
4SE2824L	084606	2.8	230/1	60	1750	A	12.6	23.0	10/3	SOW	0.690 (17.5)
4SE2894L	084608	2.8	200-230/3	60	1750	D/H	9.2/8.0	35.9/42.7	10/4	SOW	0.750 (19.1)
4SE2844L	084609	2.8	460/3	60	1750	G	4.0	18.0	10/4	SOW	0.750 (19.1)
4SE2854L	089301	2.8	575/3	60	1750	F	3.2	14.4	10/4	SOW	0.750 (19.1)
4SE3724L	084610	3.7	230/1	60	1750	A	20.0	29.0	10/3	SOW	0.690 (17.5)
4SE3794L	084611	3.7	200-230/3	60	1750	B/E	12.6/10.9	35.9/42.7	10/4	SOW	0.750 (19.1)
4SE3744L	084612	3.7	460/3	60	1750	E	5.4	21.3	10/4	SOW	0.750 (19.1)
4SE3754L	089302	3.7	575/3	60	1750	G	5.6	21.6	10/4	SOW	0.750 (19.1)
4SE5024L	088821	5.0	230/1	60	1750	A	28.0	59.0	10/3	SOW	0.690 (17.5)
4SE5094L	088822	5.0	200-230/3	60	1750	B/D	20.9/19.0	48.6/56.0	10/4	SOW	0.750 (19.1)
4SE5044L	088823	5.0	460/3	60	1750	D	9.0	28.0	10/4	SOW	0.750 (19.1)
4SE5054L	088824	5.0	575/3	60	1750	E	8.3	23.0	10/4	SOW	0.750 (19.1)

Moisture/Temperature sensor cord for all phase models is 18/5 SOW, 0.476 (12.1mm) O.D.

IMPORTANT !

- 1.) PUMP MAY BE OPERATED "DRY" FOR EXTENDED PERIODS WITHOUT DAMAGE TO MOTOR AND/OR SEALS.
- 2.) THIS PUMP IS APPROPRIATE FOR THOSE APPLICATIONS SPECIFIED AS CLASS I DIVISION II HAZARDOUS LOCATIONS.
- 3.) THIS PUMP IS NOT APPROPRIATE FOR THOSE APPLICATIONS SPECIFIED AS CLASS I DIVISION I HAZARDOUS LOCATIONS.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.

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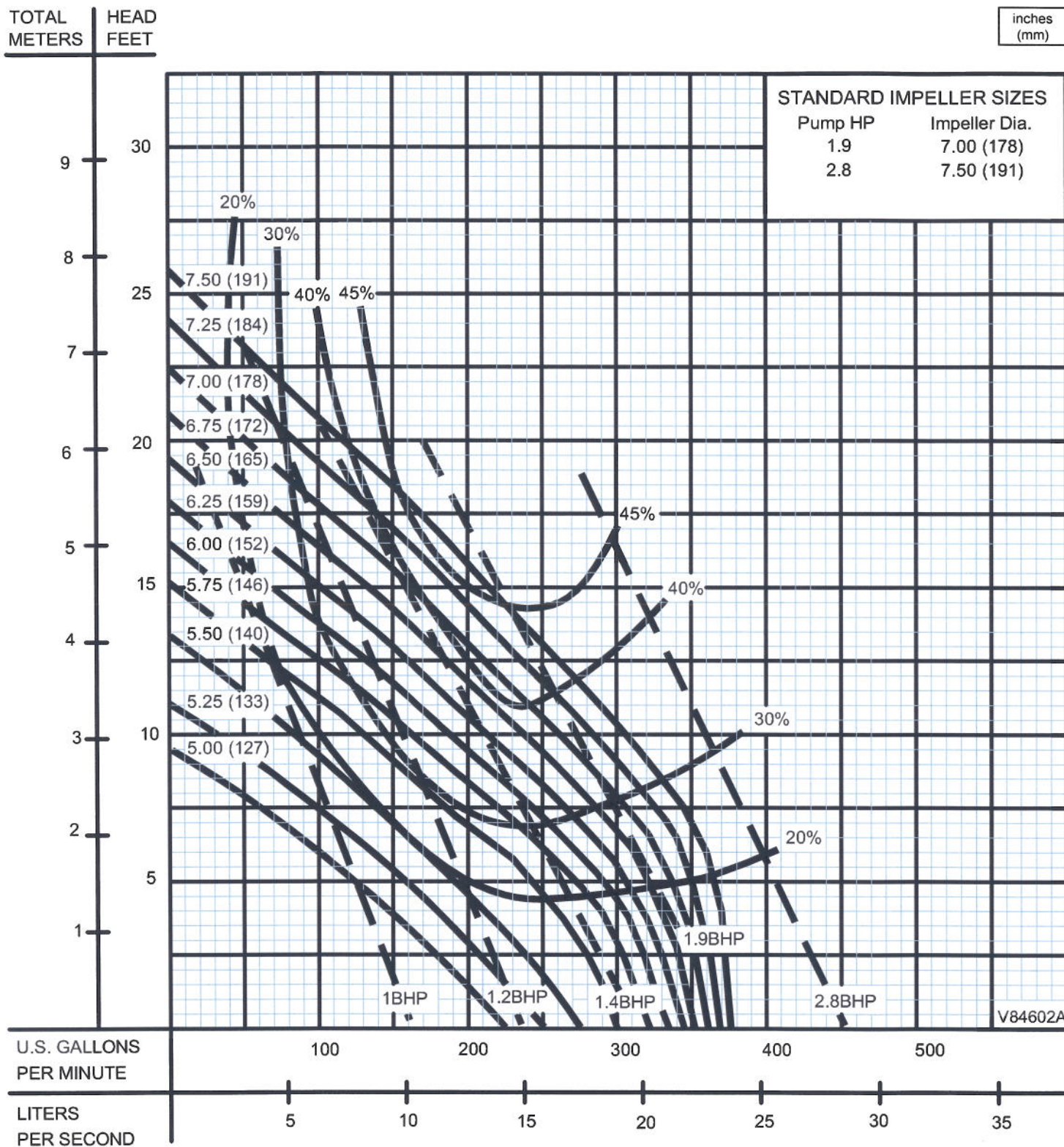
CRANE®

A Crane Co. Company

PUMPS & SYSTEMS

USA: (937) 778-8947 • Canada: (905) 457-6223 • International: (937) 615-3598

4" Horizontal Discharge - Submersible Non-Clog Pumps



Testing is performed with water, specific gravity 1.0 @ 68° F @ (20°C), other fluids may vary performance

Series 4SE-L

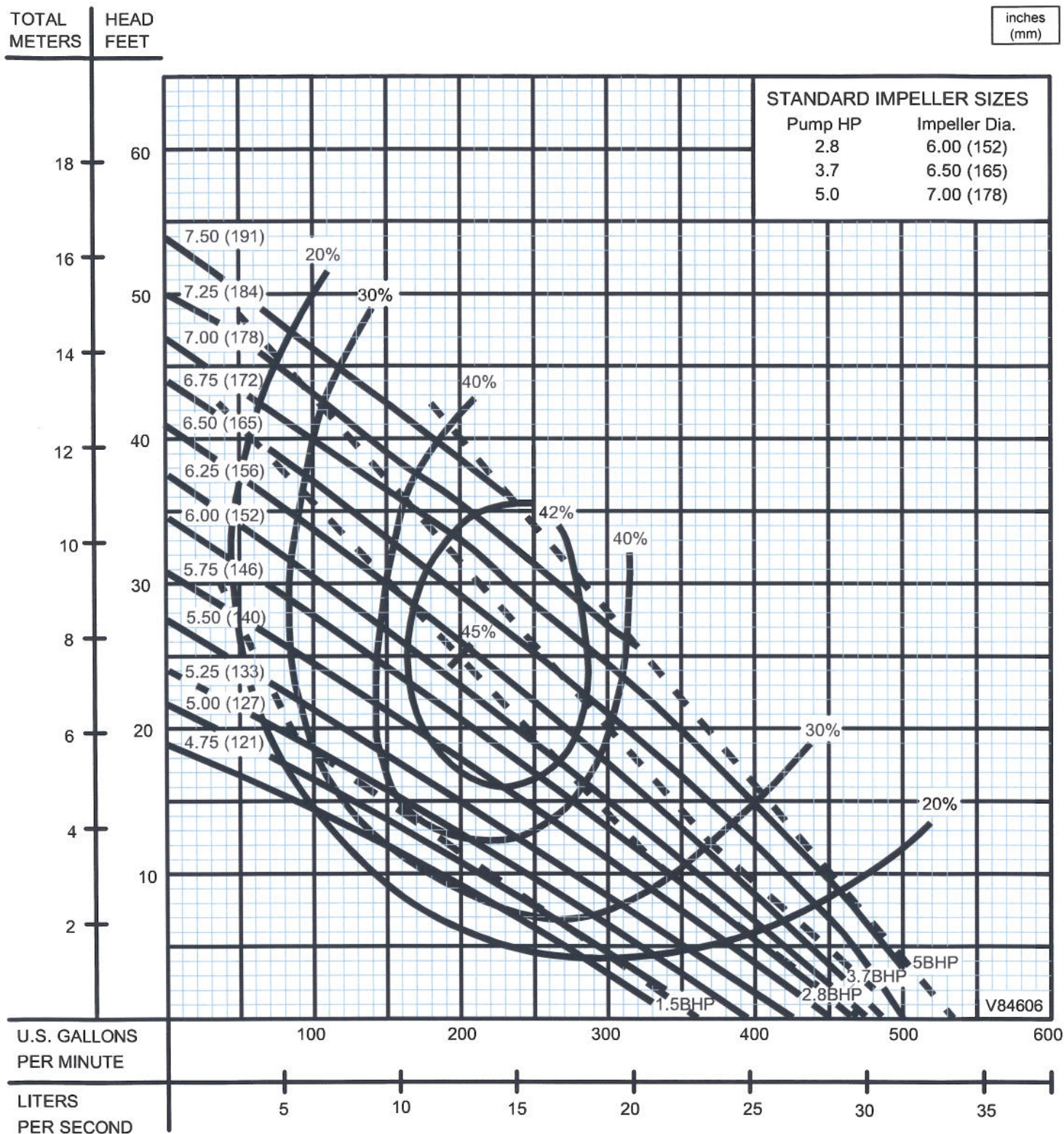
Performance Curve

2.8, 3.7 & 5.0HP, 1750RPM, 60Hz

BARNES®

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4" Horizontal Discharge - Submersible Non-Clog Pumps



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