

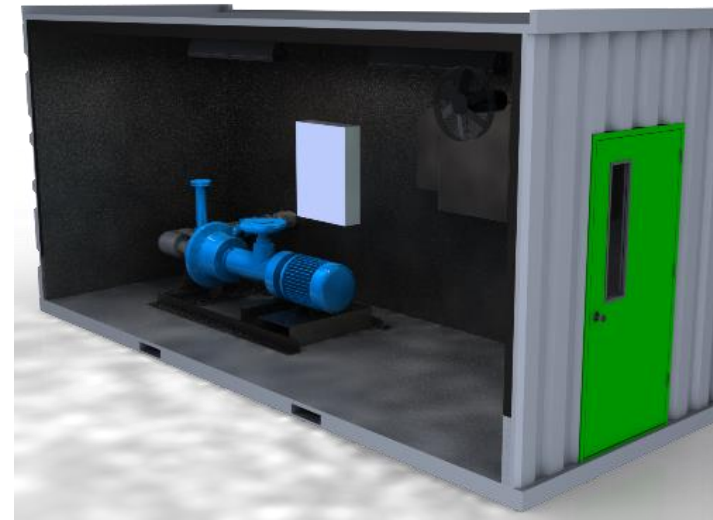
50hp Pump Module

AQUEN USA offers a system designed to draw water from a pond or storage tank. The container houses a single vacuum assisted self-priming centrifugal pump. The pump is VFD controlled based upon discharge pressure or VFD frequency.

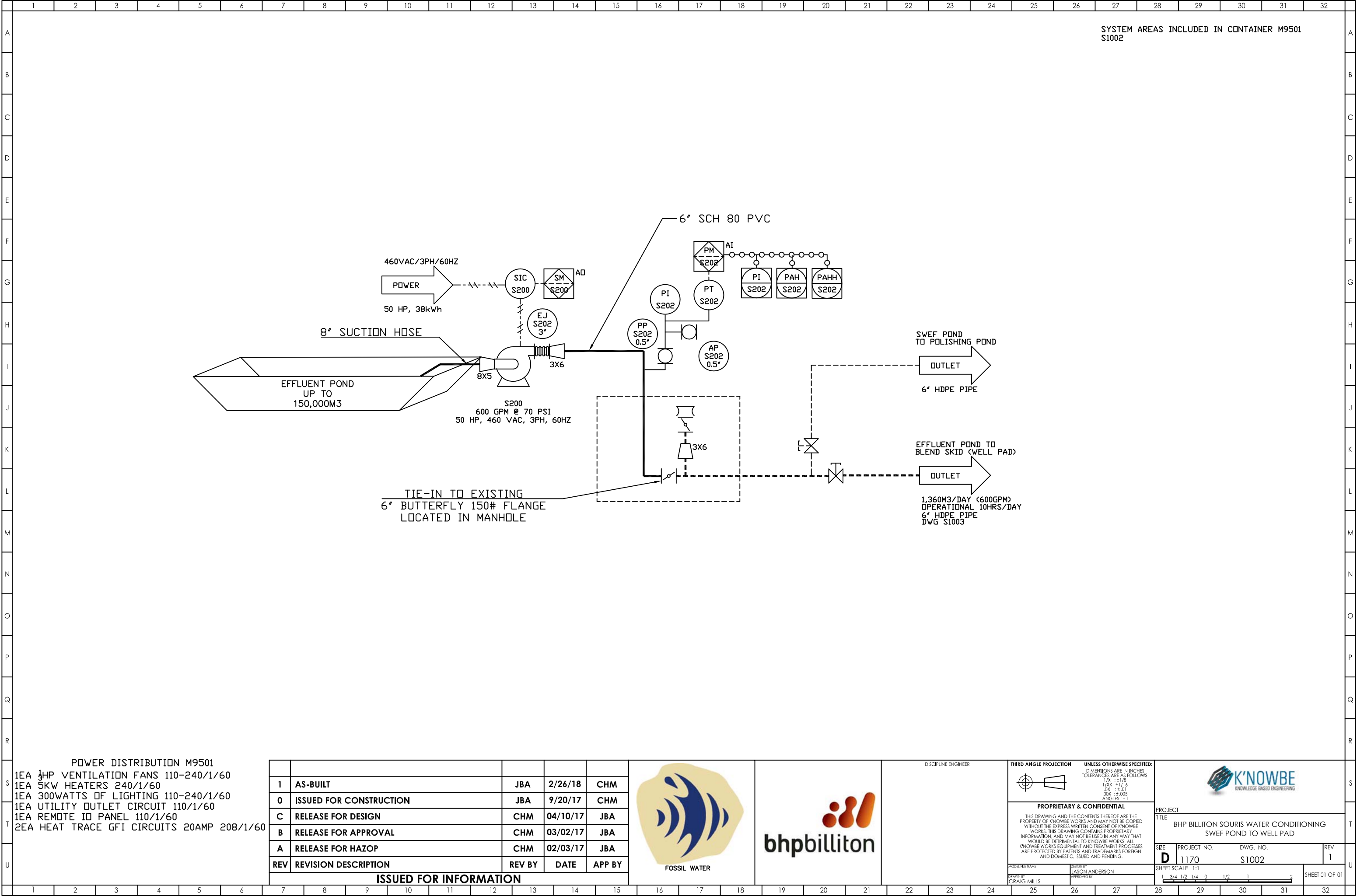
The system is enclosed in a 20' shipping container. The container has been insulated and modified to include a 36" man door, utility outlet, lights, electric heat, and ventilation. Electrical connections include 480V 3ph and 208V 1ph.



- 1ea Pioneer Pump PP53 Self Priming Pump
- Ductile Iron Construction with Run Dry Mechanical Seal and Cast-Iron Wear Rings
- Stainless Steel Impeller



- Oil Lubricated Bearing Frame
- Discharge Check Valve
- Automation Direct VFD



Pump Data Sheet - .

Company: C H Spencer
Name: Cameron Hammon
Date: 3/23/2017

Option 1



Pump:

Size: SC53C14
Type: Standard Centrifugal
Synch Speed: 1800 rpm
Curve: A2286HQ
Specific Speeds:
Dimensions:
Speed: 1780 rpm
Dia: 13.75 in
Impeller: 5x3
Ns: ---
Nss: ---
Suction: 5 in
Discharge: 3 in

Pump Limits:

Temperature: ---
Pressure: ---
Sphere Size: 0.75 in
Power: ---
Eye Area: ---

Search Criteria:

Flow: 600 US gpm
Head: 70 psi

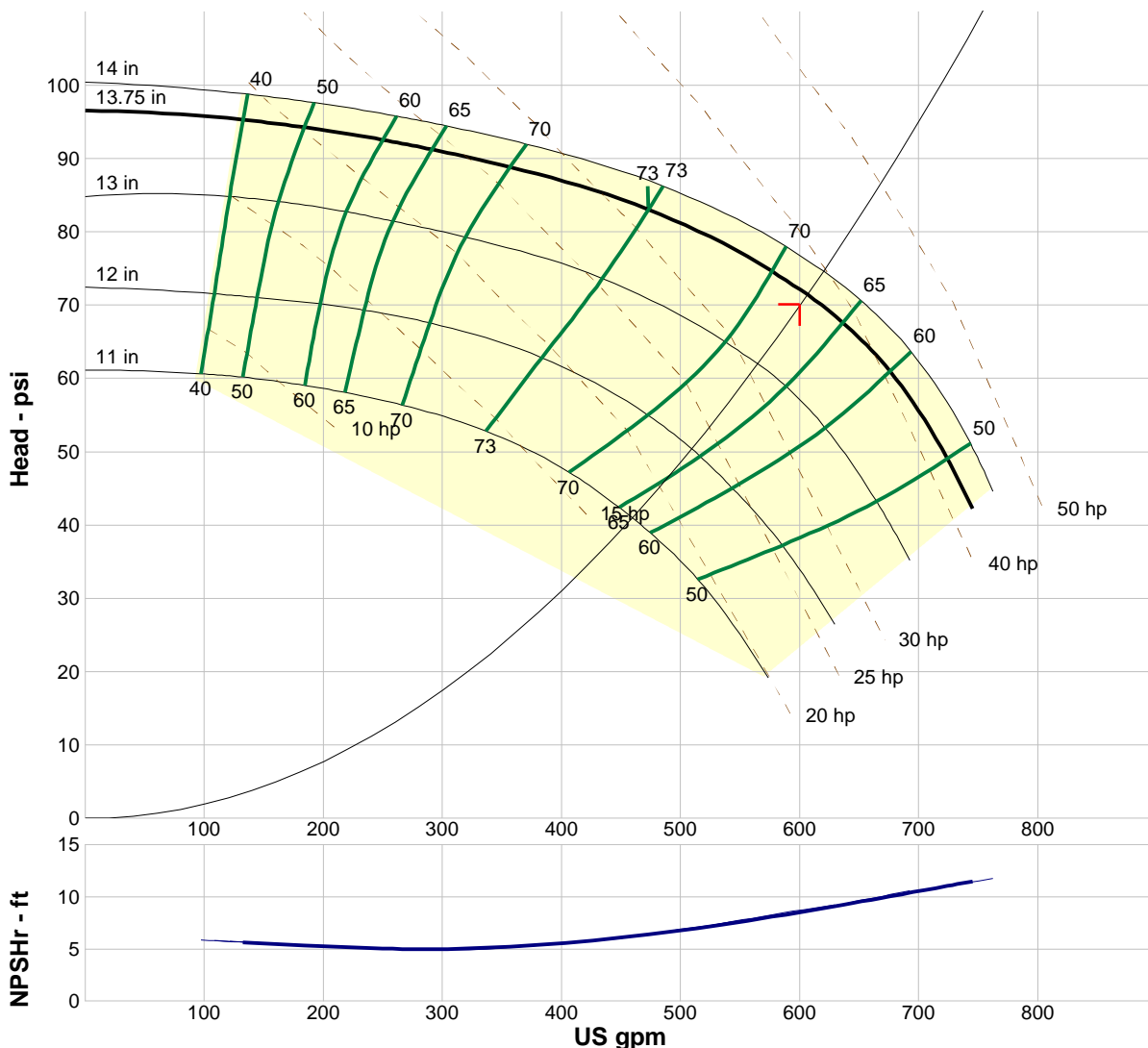
Fluid:

Water
Density: 62.37 lb/ft³
Viscosity: 1.105 cP
NPSHa: ---
Temperature: 60 °F
Vapor Pressure: 0.2563 psi a
Atm Pressure: 14.7 psi a

Motor:

Standard: NEMA
Enclosure: TEFC
Sizing Criteria: Max Power on Design Curve
Size: 50 hp
Speed: 1800 rpm
Frame: 326T

---- Duty Point ----	
Flow:	605 US gpm
Head:	71.2 psi
Eff:	67.6%
Power:	37.1 hp
NPSHr:	8.66 ft
---- Design Curve ----	
Shutoff Head:	96.5 psi
Shutoff dP:	96.5 psi
Min Flow:	---
BEP:	73% @ 472 US gpm
NOL Power:	42.3 hp @ 745 US gpm
-- Max Curve --	
Max Power:	44.8 hp @ 762 US gpm



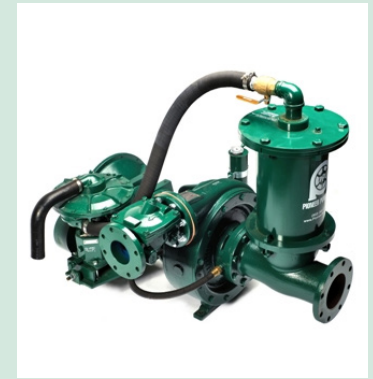
Performance Evaluation:

Flow US gpm	Speed rpm	Head psi	Efficiency %	Power hp	NPSHr ft
720	1780	49.9	50.7	41.3	11
600	1780	71.8	68	36.9	8.56
480	1780	82.4	72.8	31.7	6.52
360	1780	88.6	70.1	26.5	5.26
240	1780	92.8	58.5	22.1	5.09



Pioneer Prime

PP53C14L71



Typical Pump Configuration

Performance

Pioneer Prime series - vacuum assisted, end suction centrifugal pump

Bare shaft, frame mounted, fully automatic dry priming, vacuum assisted, run dry, heavy duty pump

Size	5" x 3" 125 x 76 mm
Flow, Max	950 USgpm 220 m ³ /h 60 l/s
Head, Max	350 feet 110 meters
Flow at BEP	600 USgpm 140 m ³ /h 40 l/s
Efficiency at BEP	73%
Solids Handling, Max	0.75" 19 mm
Operating Speed, Max	2200 rpm
Suction Connection	5" (125 mm) 150 ANSI Flanges
Delivery Connection	3" (76 mm) 150 ANSI Flanges
Bearing Lubrication	Oil STD Grease optional
Fasteners	Imperial

Applications

Oil & Gas	Construction
Industrial	Mining
Petrochemical	Rental
Agriculture	Irrigation

PosiValve™ Patent #6,783,730

High flow, heavy duty pump

The PP53C14 is a high flow, ruggedized pump designed to run over a broad range of performance and deliver outstanding suction lift. The rugged construction and modular design provide proven reliability and flexibility in the most demanding applications.

UltraPrime™ Priming System

Priming System	Mechanically Driven Diaphragm Style Vacuum Pump
Air Removal Capability	50 CFM
Priming Chamber	Single chamber with positive sealing air separation PosiValve™ with stainless steel float ball & linkage.
Discharge Check Valve	Swing Style - ductile iron with Buna-n Disc

Other Specifications

Mechanical Seal	Single seal w/ tungsten carbide vs. silicon carbide seal faces, Viton® elastomers, 300 series stainless steel hardware and spring, designed for indefinite dry running	
Pump End Bearing	Single Row Ball	
Drive End Bearing	Single Row Ball	
Shaft	17-4 PH Stainless Steel	

Construction Materials

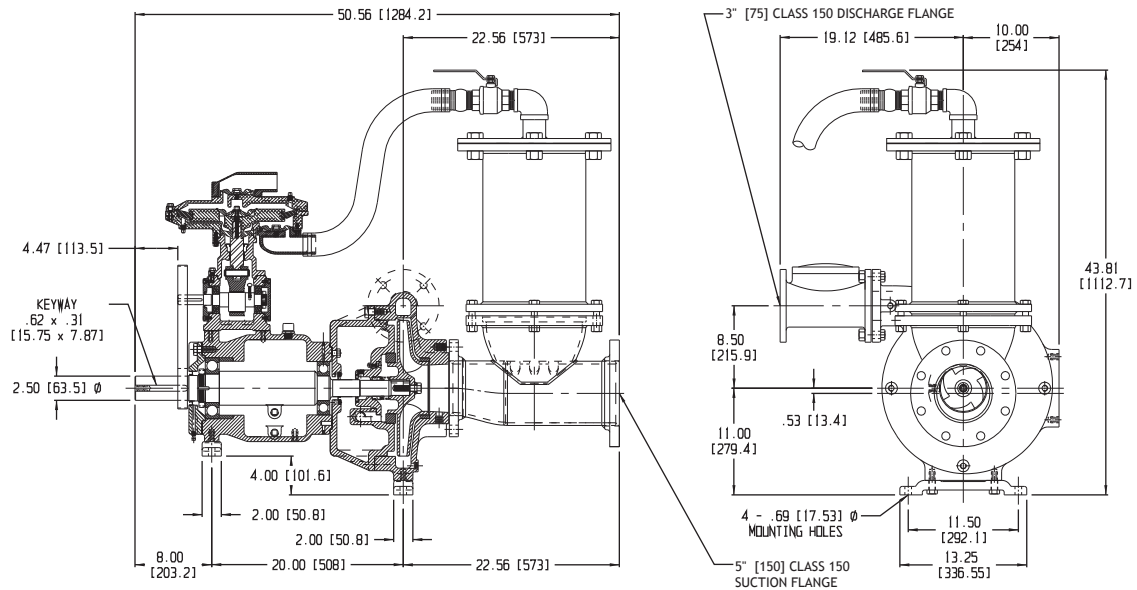
	Standard Construction	CD4MCu Stainless Steel
Impeller	CA6NM SS	CD4MCu
Volute	Ductile Iron ASTM A536 65-45-12	CD4MCu
Wear Ring	ASTM A48 Class 40 Gray Iron	316 SS
Suction Cover	Ductile Iron ASTM A536 65-45-12	CD4MCu
Brac-plate	Ductile Iron ASTM A536 65-45-12	CD4MCu

Mechanical Dimensions



Typical Pump Configuration

PP53C14



Performance Curve

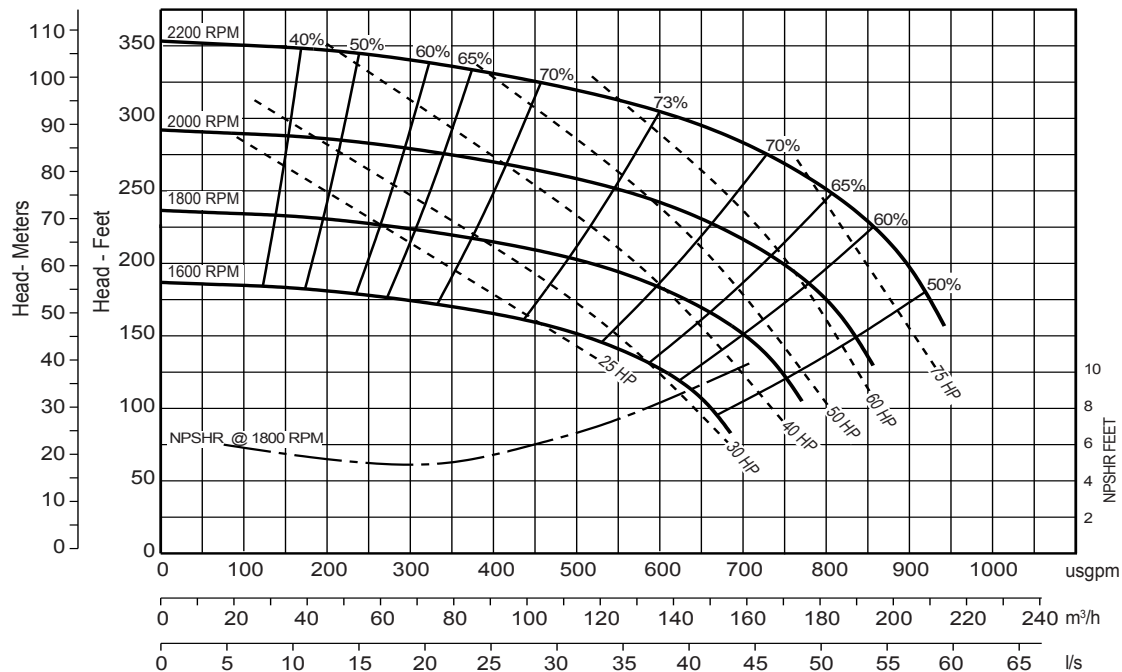
Model: PP53C14

Impeller Dia: 14"

Speed: Variable

Solids Size: 0.75"

Curve #A2776HQ



Note: Losses from priming system not shown

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