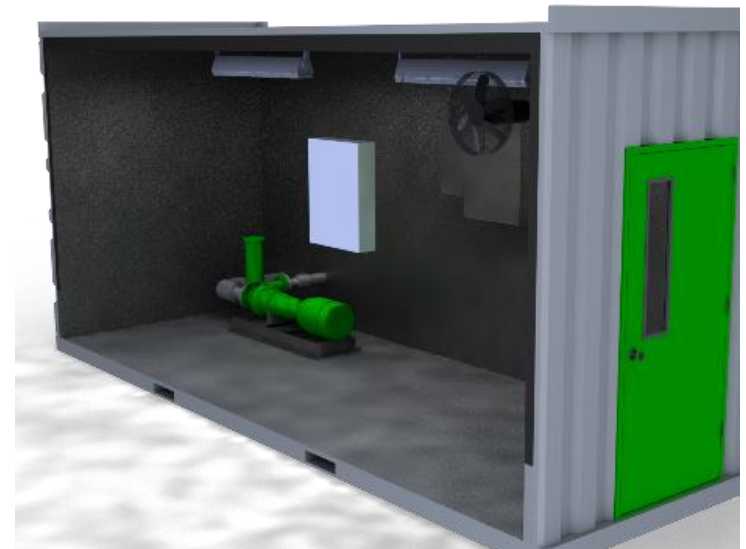


20hp Pump Module

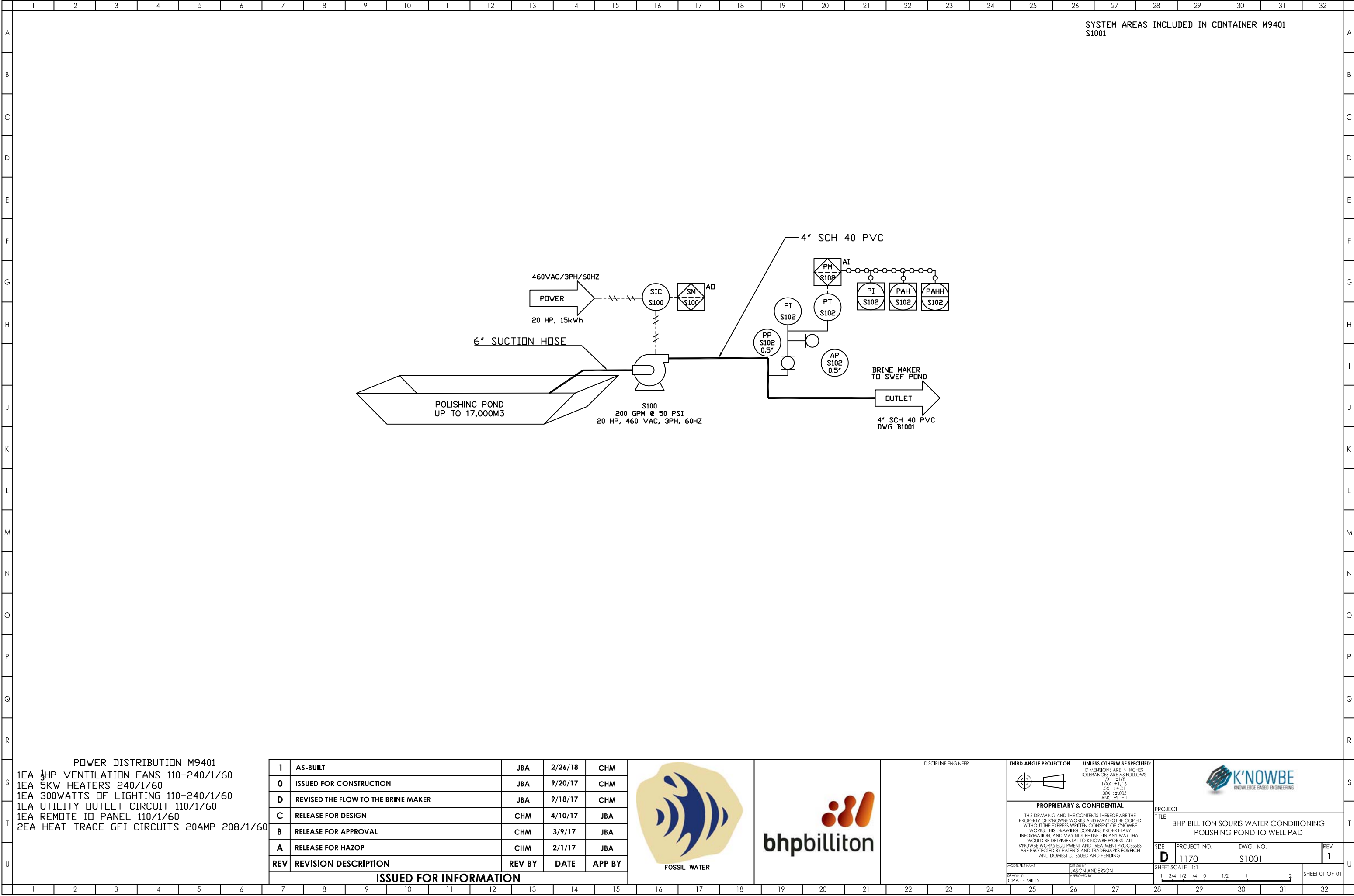
AQUEN USA offers a system designed to draw water from a pond or storage tank. The container houses a single vacuum assisted self-priming centrifugal pump. The pump is VFD controlled based upon discharge pressure or VFD frequency.

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 PP43 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





Pioneer Prime

PP43C75L71



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	4" x 3" 100 x 76 mm
Flow, Max	400 USgpm 90 m ³ /h 30 l/s
Head, Max	95 feet 30 meters
Flow at BEP	330 USgpm 80 m ³ /h 20 l/s
Efficiency at BEP	75%
Solids Handling, Max	0.5" 13 mm
Operating Speed, Max	2200 rpm
Suction Connection	4" (100 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 PP43C75 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

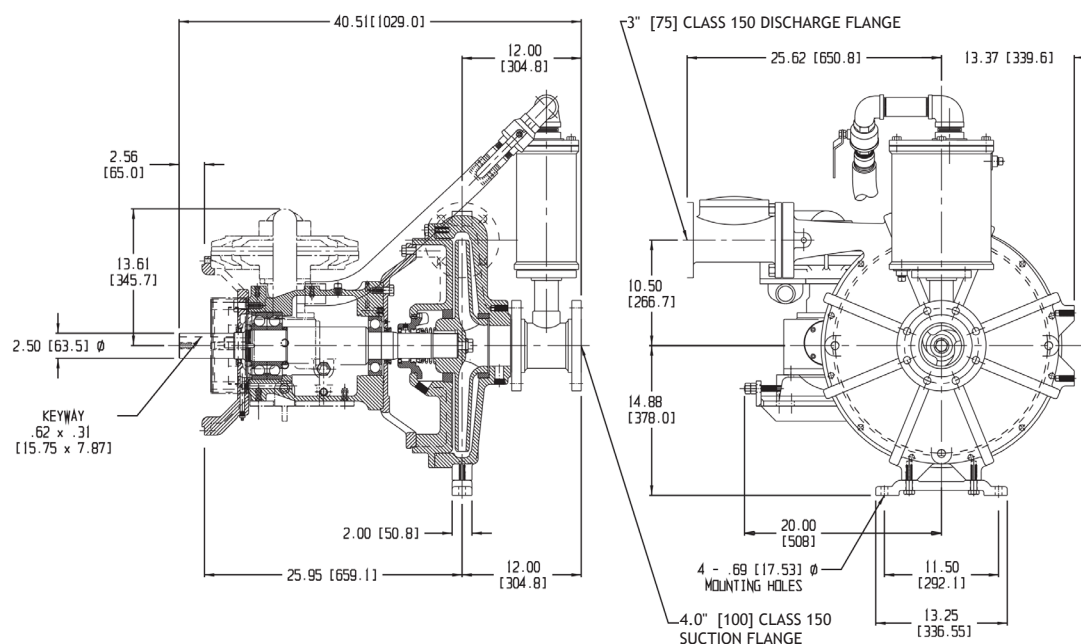
	Standard Construction	CD4MCu Stainless Steel
Impeller	CA6NM SS	CD4MCu
Volute	Ductile Iron ASTM A536 65-45-12	CD4MCu
Wear Ring	ASTM A48 Class 40 Gray Iron	316 SS
Suction Cover	Ductile Iron ASTM A536 65-45-12	CD4MCu
Brac-plate	Ductile Iron ASTM A536 65-45-12	CD4MCu

Mechanical Dimensions



Typical Pump Configuration

PP43C75



Performance Curve

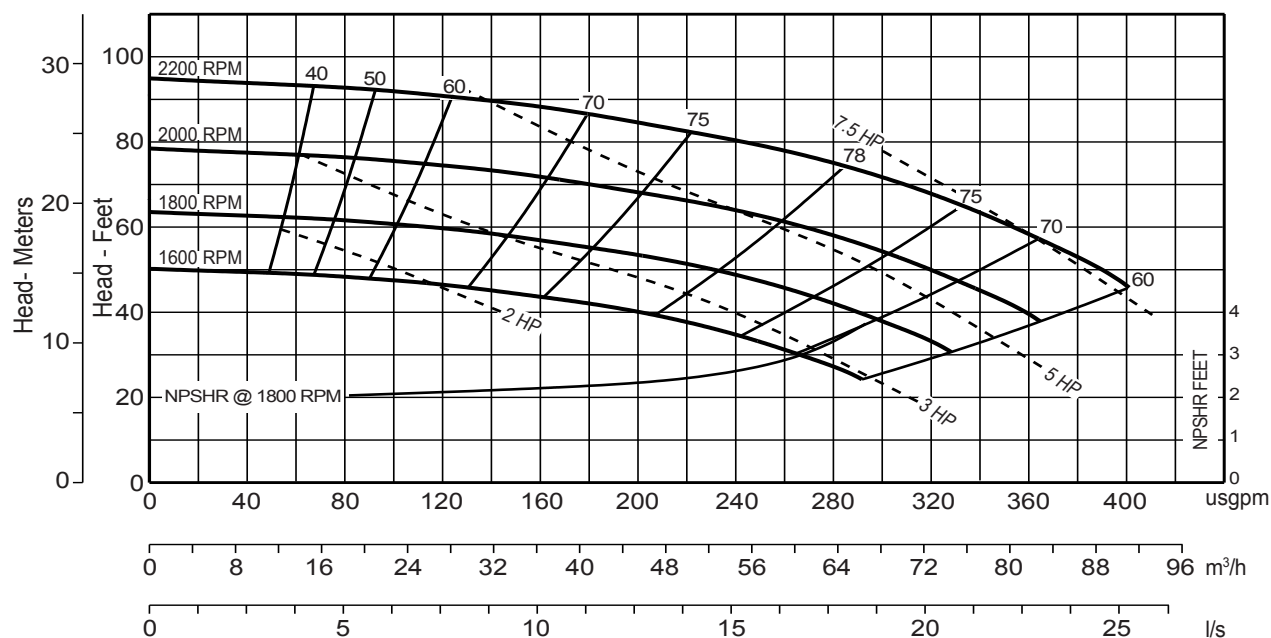
Model: PP43C75

Impeller Dia: 7.5"

Speed: Variable

Solids Size: 0.5"

Curve #A2716HQ



Corporate +1 (503) 266-4115 ■ EMEA +44 (0)1449 736777 ■ South Africa +27 (0) 118240085 ■ Australia +61 3 9988 1650

www.pioneerpump.com

Company: C H Spencer
 Name: Cameron Hammon
 Date: 1/31/2017



Pump:

Size: SC43C75
 Type: Standard Centrifugal
 Synch Speed: 3600 rpm
 Curve: A1636HQ
 Specific Speeds:
 Dimensions:
 Speed: 3550 rpm
 Dia: 6.375 in
 Impeller: 4x3
 Ns: ---
 Nss: ---
 Suction: 4 in
 Discharge: 3 in

Pump Limits:

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

Search Criteria:

Flow: 320 US gpm Head: 60 psi

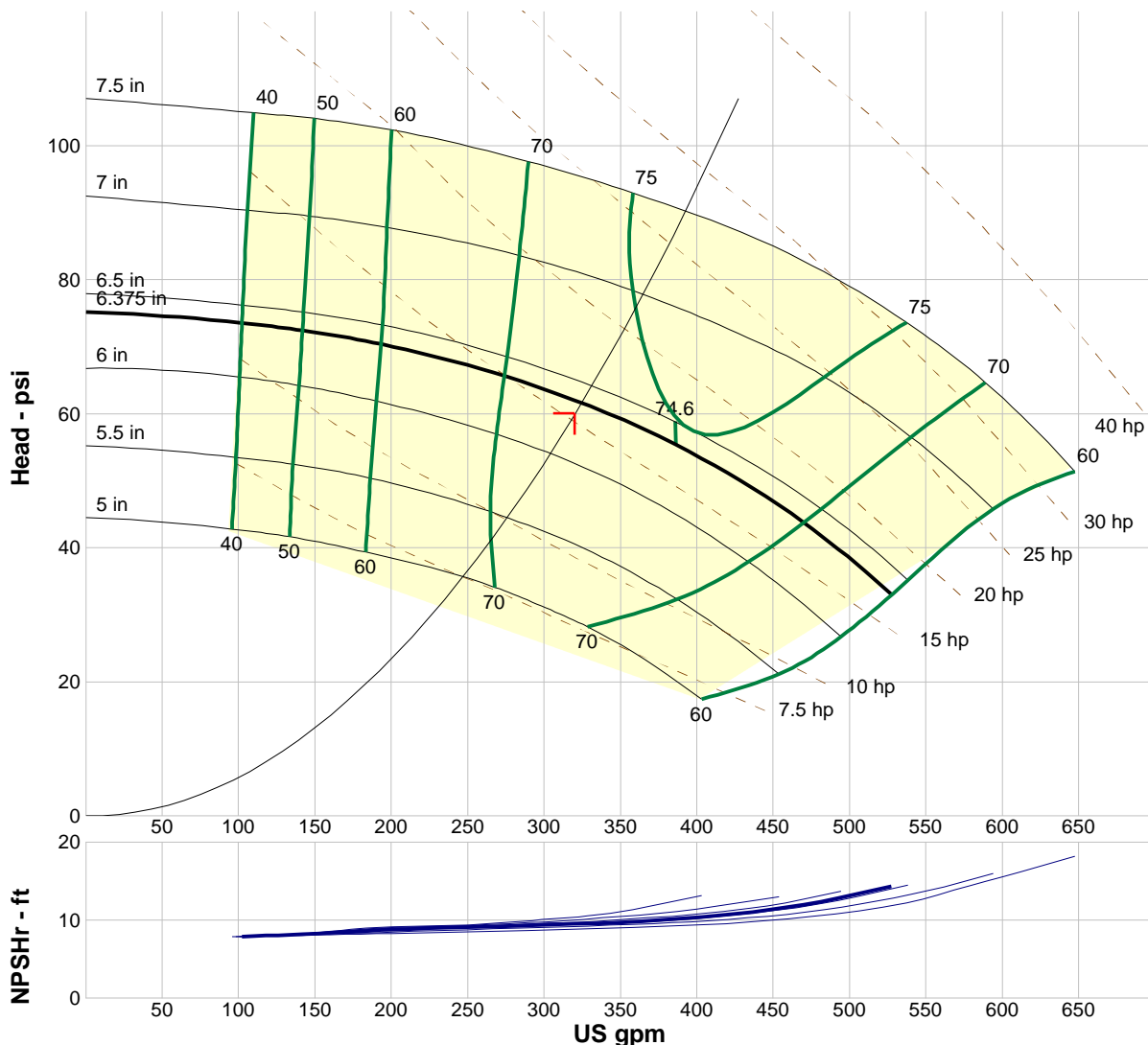
Fluid:

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:

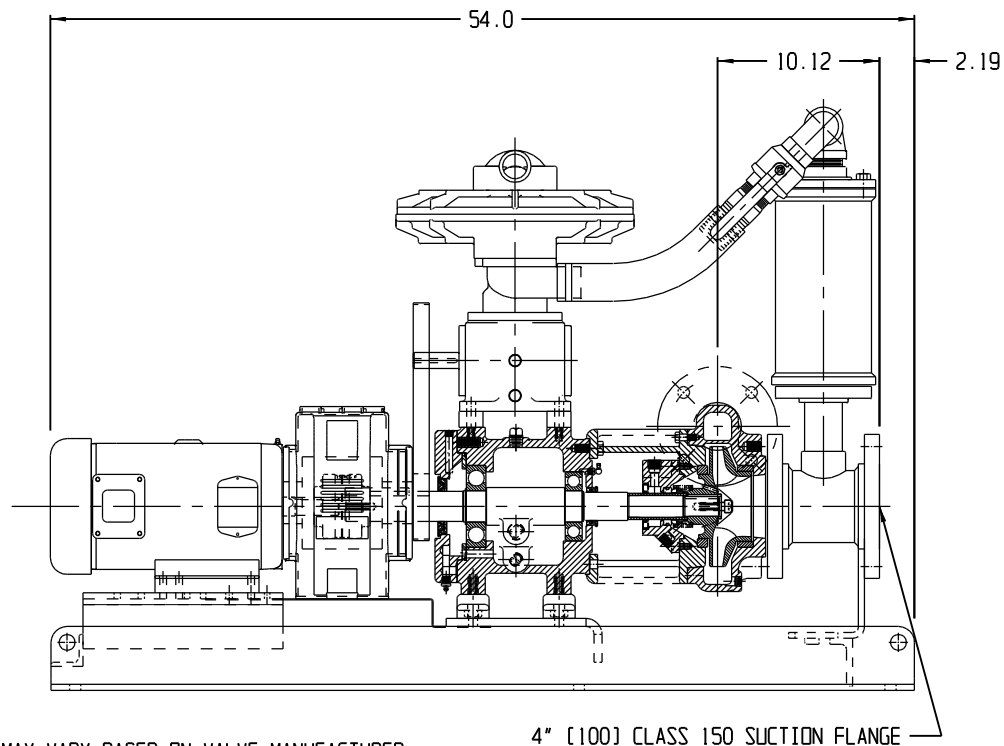
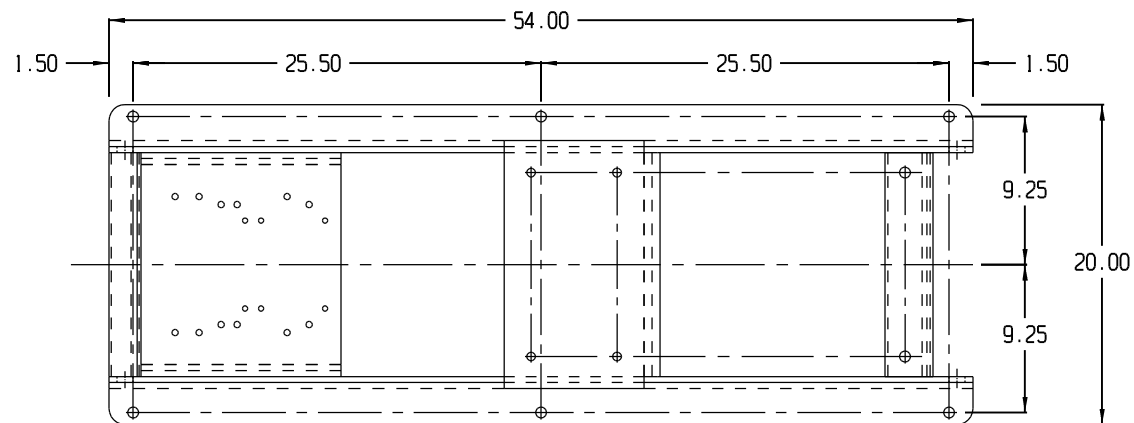
Standard: NEMA
 Enclosure: TEFC
 Sizing Criteria: Max Power on Design Curve
 Size: 20 hp
 Speed: 3600 rpm
 Frame: 256T

---- Duty Point ----	
Flow:	323 US gpm
Head:	61.1 psi
Eff:	72%
Power:	15.7 hp
NPSHr:	9.67 ft
---- Design Curve ----	
Shutoff Head:	75.2 psi
Shutoff dP:	75.2 psi
Min Flow:	---
BEP:	74.6% @ 386 US gpm
NOL Power:	17.1 hp @ 470 US gpm
-- Max Curve --	
Max Power:	32.3 hp @ 647 US gpm

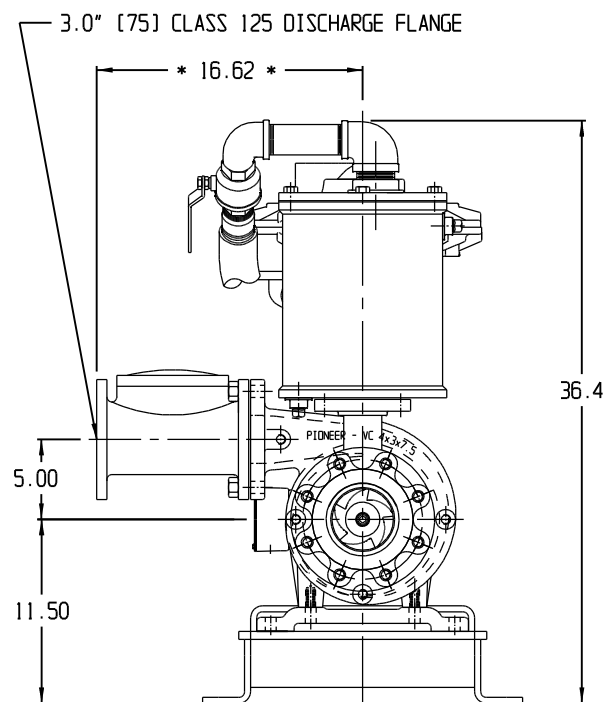


Performance Evaluation:

Flow US gpm	Speed rpm	Head psi	Efficiency %	Power hp	NPSHr ft
384	3550	55.6	74.6	16.7	10.2
320	3550	61.4	71.9	15.7	9.65
256	3550	66.7	67.8	14.6	9.16
192	3550	70.4	59.8	13.2	8.73
128	3550	72.8	46.6	11.6	8.12



NOTE:
- * DIMENSION MAY VARY BASED ON VALVE MANUFACTURER *.



MODEL : PP43C75-BH8.5D-182/4T FRAME
REFERENCE :

DWG NO. 15362A
REVISION: 000
DRAWN BY: DBG
DATE: 5/14/2015