



Company: Bonneville Power Administration

Name:

Date: 11/25/2006

Pump:

Size: 7HL (1 stage)
 Type: Vertical
 Synch speed: 1760 rpm
 Curve: 7HL
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1760 rpm
 Dia: 4.93 in
 Impeller:
 Ns: 1760
 Nss: ---
 Suction: --- in
 Discharge: --- in
 Bowl size: 7.13 in
 Max lateral: 0.38 in
 Thrust K factor: 4.5 lb/ft

Search Criteria:

Flow: --- US gpm Head: --- ft

Fluid:

Water
 Density: 62.25 lb/ft³
 Viscosity: 1.105 cP
 NPSHa: --- ft
 Temperature: 60 °F
 Vapor pressure: 0.2563 psi a
 Atm pressure: 14.7 psi a

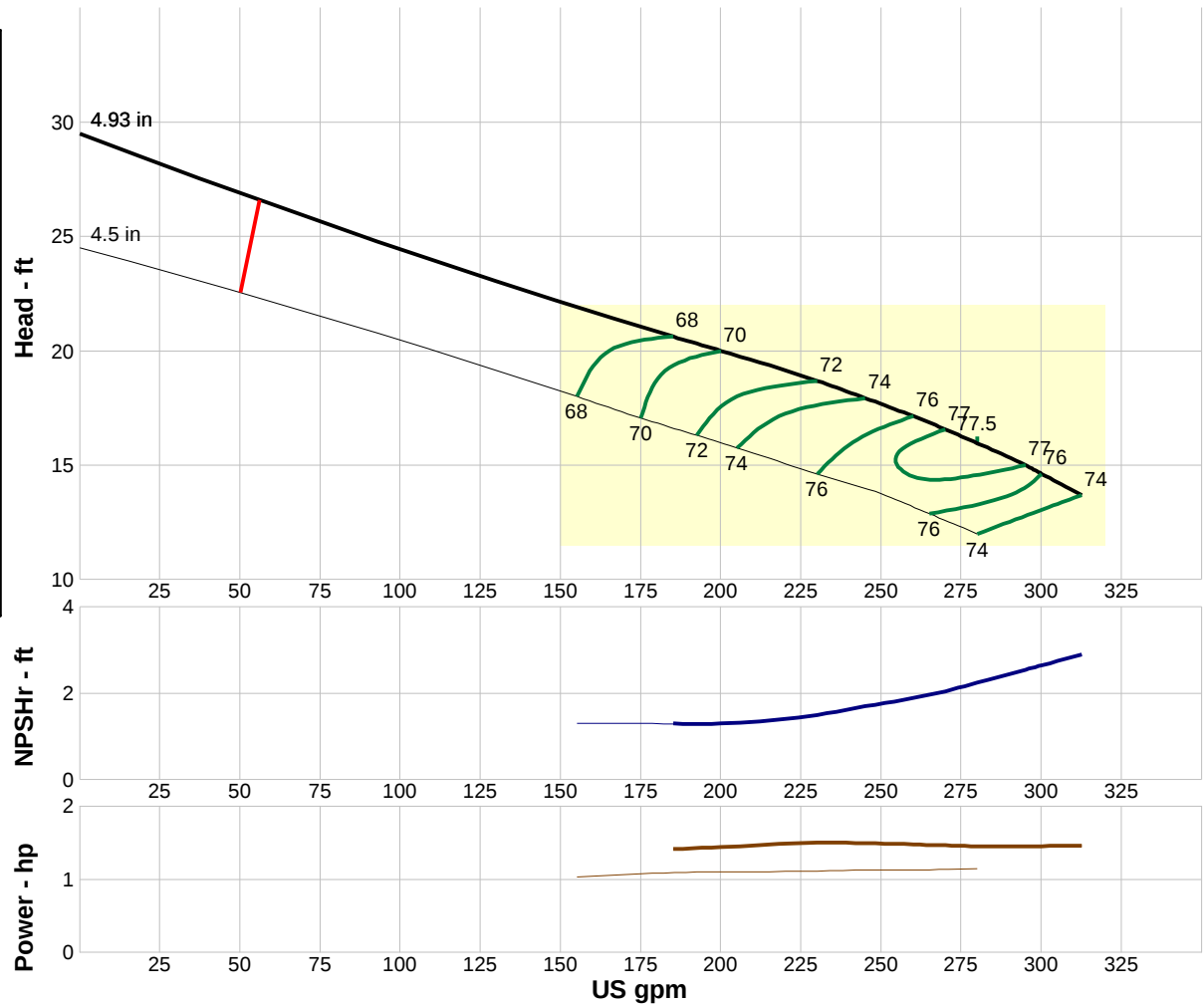
Motor:

Standard: NEMA --- hp
 Enclosure: TEFC Speed: ---
 Frame: ---
 Sizing criteria: Max Power on Design Curve

Pump Limits:

Temperature: 140 °F
 Pressure: 315 psi g
 Sphere size: 0.25 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	280 US gpm
Head:	16 ft
Eff:	77.5%
Power:	1.46 hp
NPSHr:	2.25 ft
---- Design Curve ----	
Shutoff head:	29.5 ft
Shutoff dP:	12.8 psi
Min flow:	56 US gpm
BEP:	77.5% @ 280 US gpm
NOL power:	1.51 hp @ 230 US gpm
-- Max Curve --	
Max power:	1.51 hp @ 230 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
300	1760	14.6	76	1.46	2.65
250	1760	17.7	74.7	1.49	1.76
200	1760	20	70	1.44	1.3
150	1760	22.3	63.3	1.36	1.3
100	1760	24.7	56.7	1.27	1.3