



Company: Bonneville Power Administration

Name:

Date: 11/25/2006

Pump:

Size: 7HH (1 stage)
 Type: Submersible
 Synch speed: 3450 rpm
 Curve: 7HH
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 3450 rpm
 Dia: 4.93 in
 Impeller:
 Ns: 3450
 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

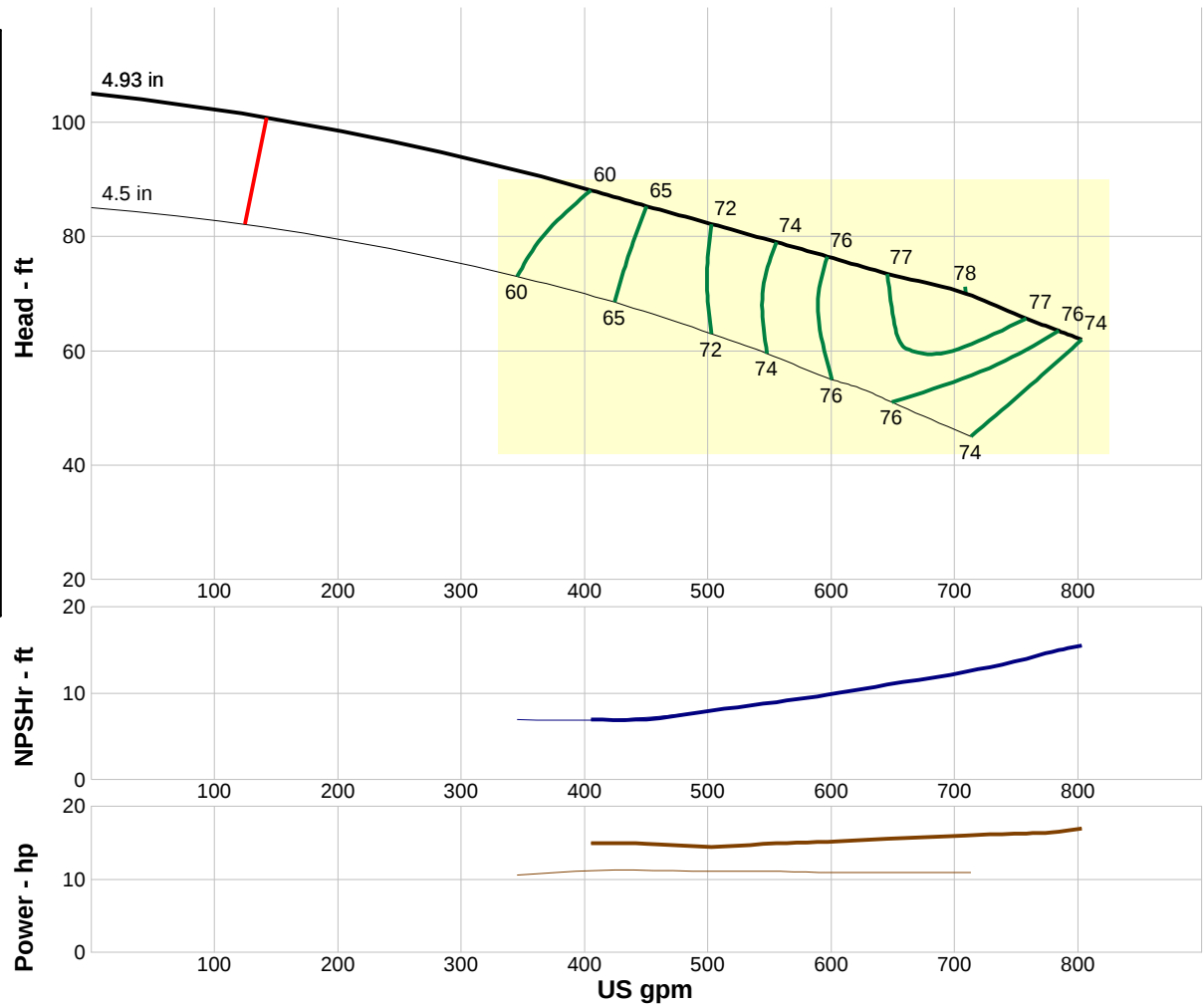
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 365 psi g
 Sphere size: 0.25 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	709 US gpm
Head:	70 ft
Eff:	78%
Power:	16.1 hp
NPSHr:	12.5 ft
---- Design Curve ----	
Shutoff head:	105 ft
Shutoff dP:	45.4 psi
Min flow:	142 US gpm
BEP:	78% @ 709 US gpm
NOL power:	17 hp @ 803 US gpm
-- Max Curve --	
Max power:	17 hp @ 803 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
770	3450	64.7	76.5	16.4	14.5
642	3450	73.7	76.9	15.5	10.9
514	3450	81.5	72.4	14.6	8.22
385	3450	88.9	57.8	15.1	7
257	3450	94.3	43.6	15.4	7