

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



Pump:

Size: 7LL (1 stage)
 Type: Submersible
 Synch speed: 3450 rpm
 Curve: 7LL
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 3450 rpm
 Dia: 5.4 in
 Impeller:
 Ns: 3450
 Nss: ---
 Suction: --- in
 Discharge: --- in
 Bowl size: 7.13 in
 Max lateral: 0.5 in
 Thrust K factor: 2.63 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

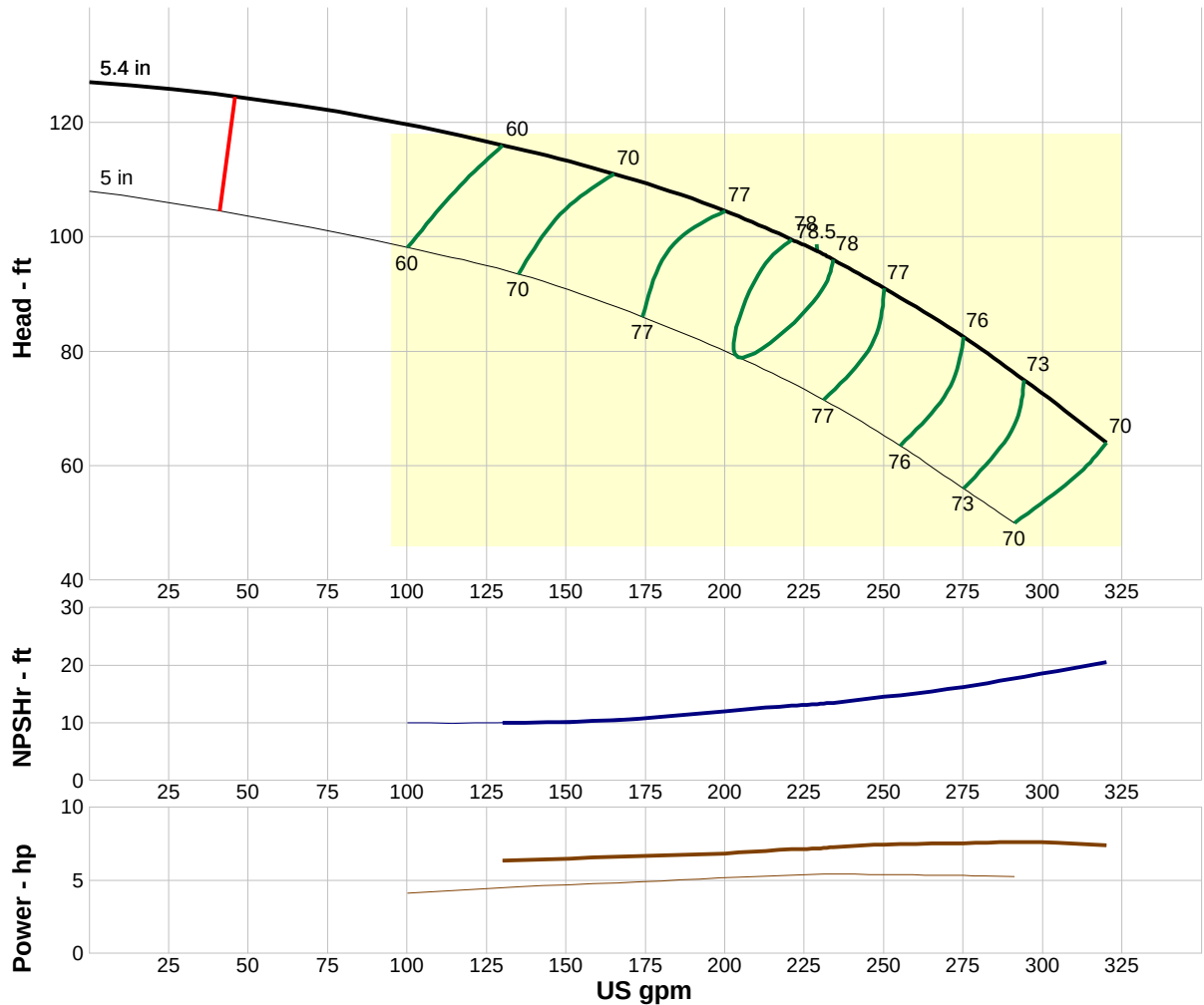
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 425 psi g
 Sphere size: 0.25 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	229 US gpm
Head:	97.5 ft
Eff:	78.5%
Power:	7.18 hp
NPSHr:	13.3 ft
---- Design Curve ----	
Shutoff head:	127 ft
Shutoff dP:	54.9 psi
Min flow:	45.8 US gpm
BEP:	78.5% @ 229 US gpm
NOL power:	7.63 hp @ 294 US gpm
-- Max Curve --	
Max power:	7.63 hp @ 294 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
307	3450	69.5	71.5	7.51	19.3
256	3450	89	76.8	7.48	14.9
205	3450	103	77.2	6.92	12.2
154	3450	113	66.9	6.53	10.3
102	3450	118	52	6.14	9.6