



Company: Bonneville Power Administration

Name:

Date: 11/25/2006

Pump:

Size: 7ML (1 stage)
 Type: Submersible
 Synch speed: 3450 rpm
 Curve: 7ML
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 3450 rpm
 Dia: 5.25 in
 Impeller:
 Ns: 3450
 Nss: ---
 Suction: --- in
 Discharge: --- in
 Bowl size: 7.13 in
 Max lateral: 0.5 in
 Thrust K factor: 3.5 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

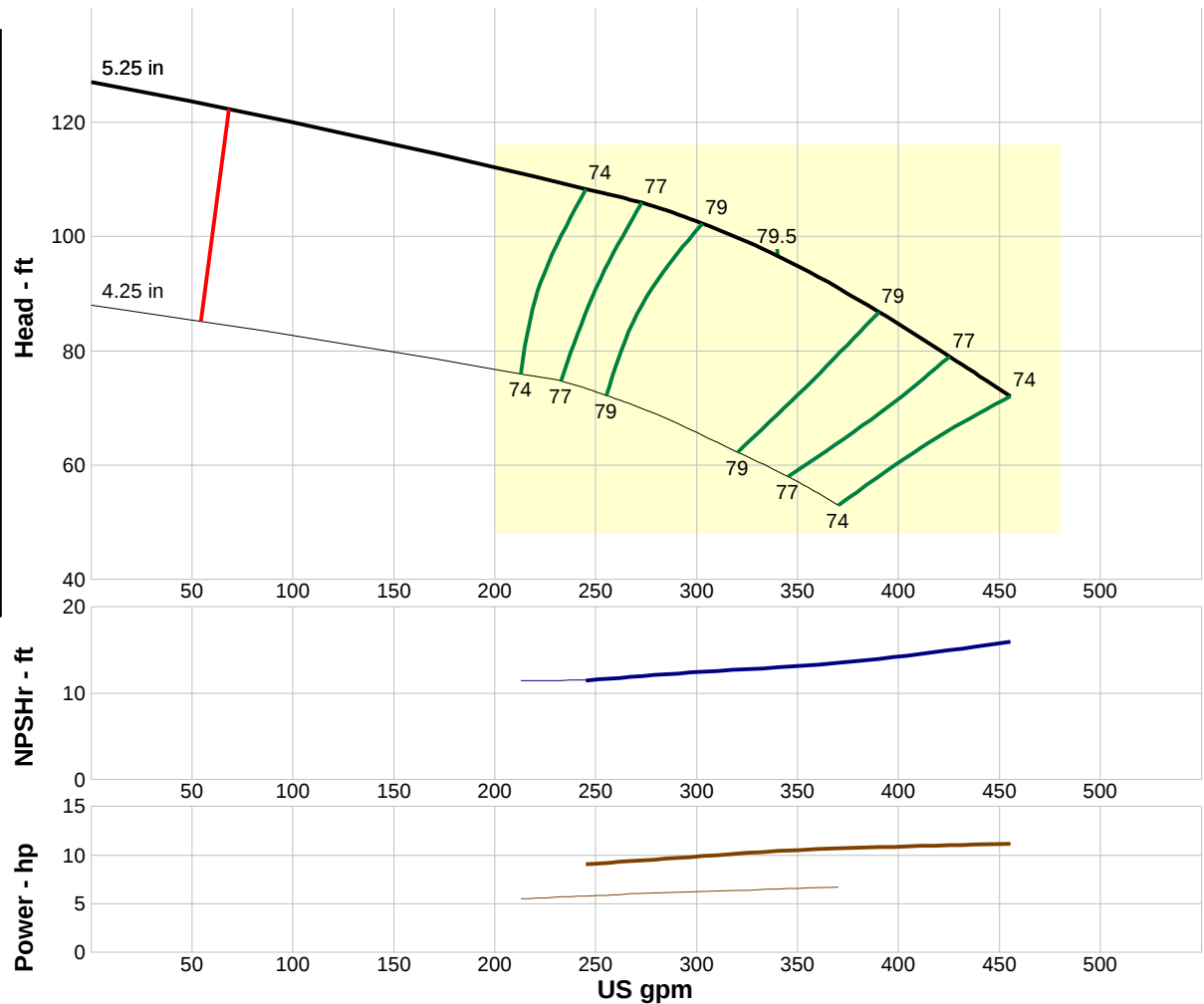
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 415 psi g
 Sphere size: 0.25 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	340 US gpm
Head:	96.6 ft
Eff:	79.5%
Power:	10.4 hp
NPSHr:	13 ft
---- Design Curve ----	
Shutoff head:	127 ft
Shutoff dP:	54.9 psi
Min flow:	68 US gpm
BEP:	79.5% @ 340 US gpm
NOL power:	11.2 hp @ 455 US gpm
-- Max Curve --	
Max power:	11.2 hp @ 455 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
437	3450	76.2	75.8	11.1	15.4
364	3450	91.9	79.3	10.6	13.5
291	3450	104	78.2	9.73	12.3
218	3450	110	71.1	8.65	11
146	3450	116	63.2	7.58	9.7