

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



Pump:

Size: 12HXX-A (1 stage)
 Type: Vertical
 Synch speed: 1760 rpm
 Curve: 12HXX-A
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1760 rpm
 Dia: 9.47 in
 Impeller:
 Ns: 1760
 Nss: ---
 Suction: 8 in
 Discharge: 8 in
 Bowl size: 11.65 in
 Max lateral: 0.375 in
 Thrust K factor: 11 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

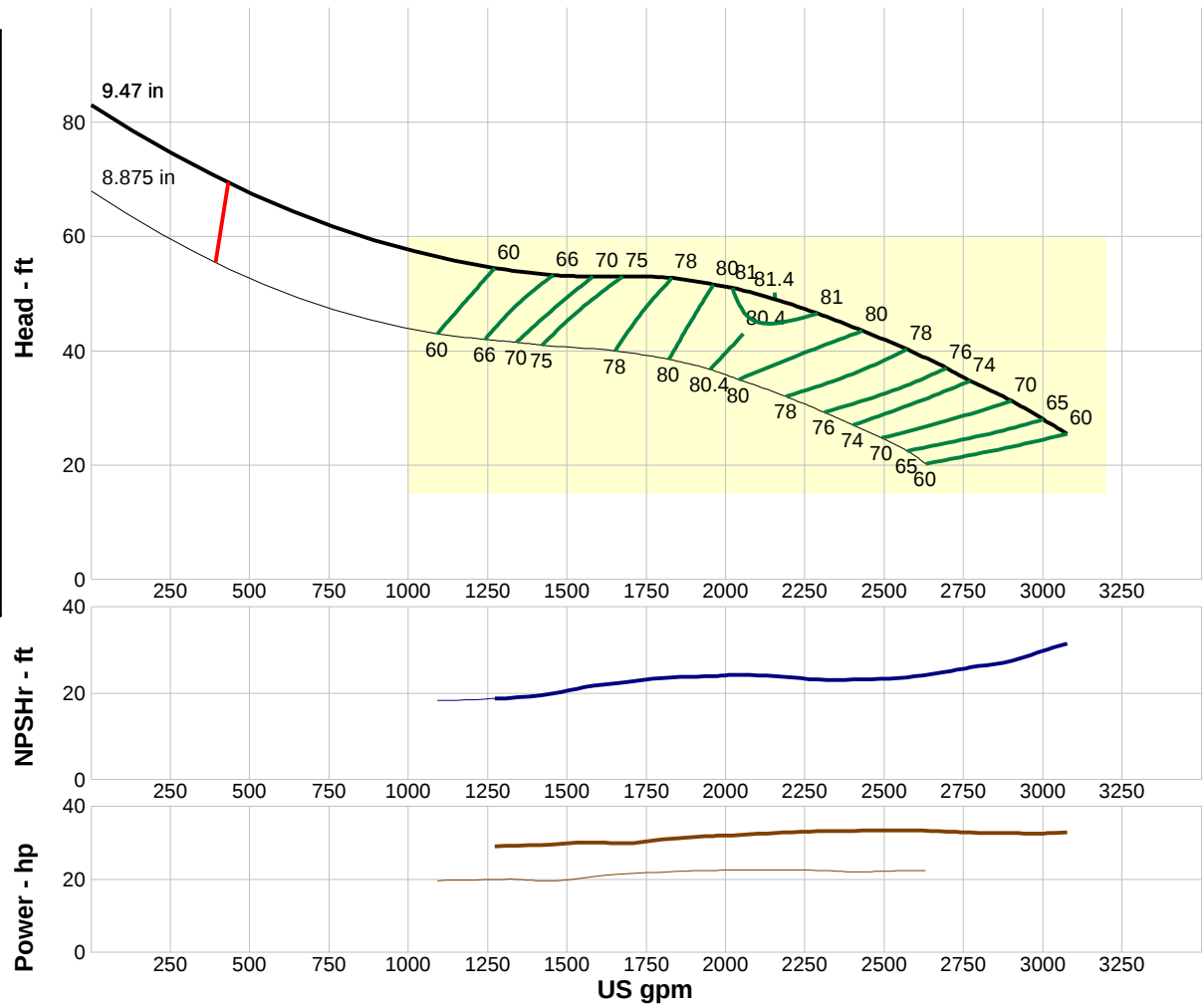
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 355 psi g
 Sphere size: 0.625 in
 Power: 450 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	2155 US gpm
Head:	49 ft
Eff:	81.4%
Power:	32.8 hp
NPSHr:	24 ft
---- Design Curve ----	
Shutoff head:	83 ft
Shutoff dP:	35.9 psi
Min flow:	431 US gpm
BEP:	81.4% @ 2155 US gpm
NOL power:	33.5 hp @ 2570 US gpm
-- Max Curve --	
Max power:	33.5 hp @ 2570 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
2952	1760	29.6	67.4	32.7	28.7
2460	1760	42.8	79.6	33.4	23.4
1968	1760	51.5	80.1	32	24
1476	1760	53.2	66.7	29.7	20.3
984	1760	60.9	50.7	28.3	16.8