

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



Pump:

Size: 12HXXH-1A (1 stage)
 Type: Vertical
 Synch speed: 1760 rpm
 Curve: 12HXXH-1A
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1760 rpm
 Dia: 10.063 in
 Impeller:
 Ns: 1760
 Nss: ---
 Suction: 8 in
 Discharge: 8 in
 Bowl size: 11.75 in
 Max lateral: 0.75 in
 Thrust K factor: 17.4 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

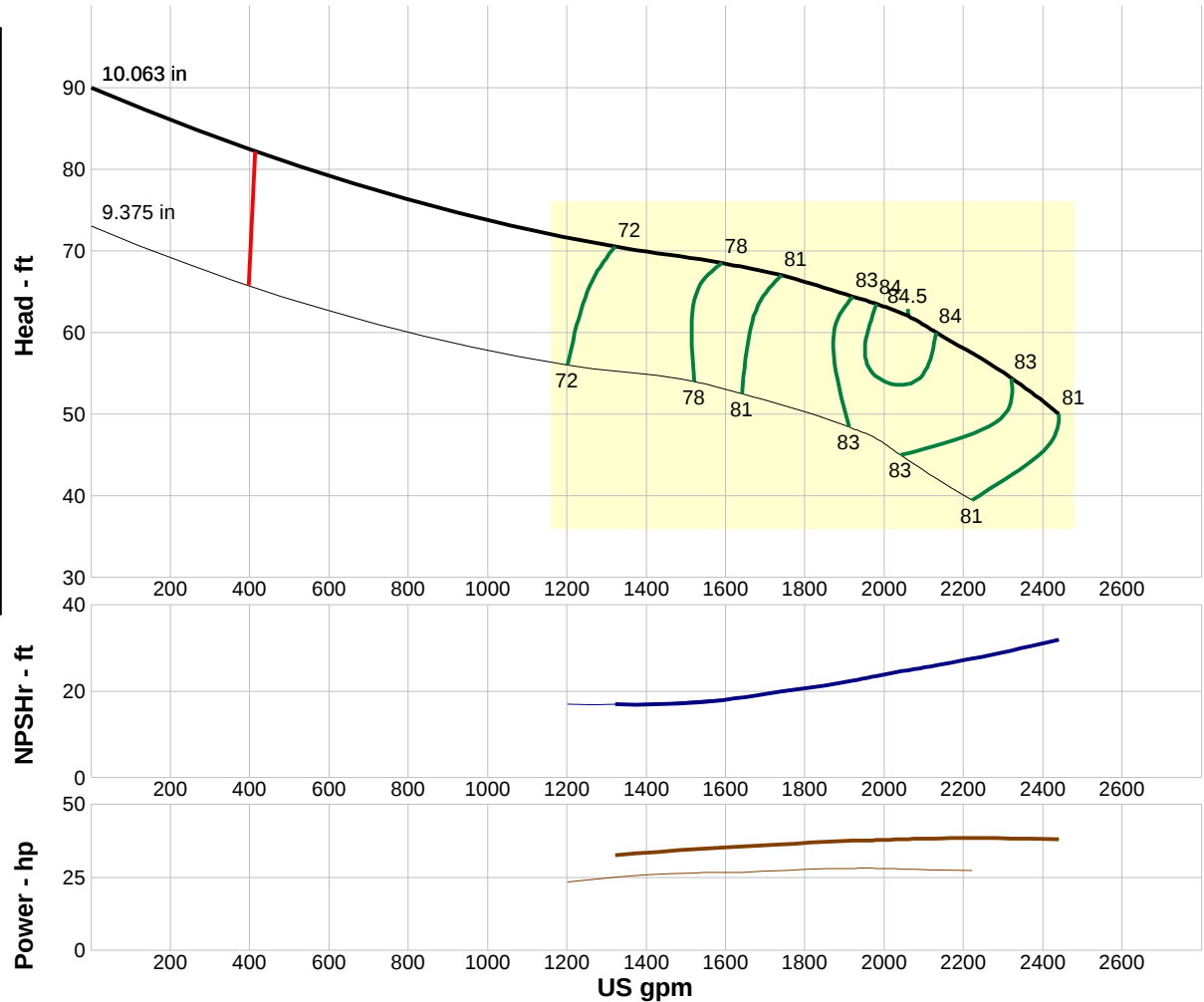
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 584 psi g
 Sphere size: 1.375 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	2060 US gpm
Head:	62 ft
Eff:	84.5%
Power:	38.2 hp
NPSHr:	24.9 ft
---- Design Curve ----	
Shutoff head:	90 ft
Shutoff dP:	38.9 psi
Min flow:	412 US gpm
BEP:	84.5% @ 2060 US gpm
NOL power:	38.4 hp @ 2130 US gpm
-- Max Curve --	
Max power:	38.4 hp @ 2130 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
2342	1760	53.6	82.6	38.3	30
1952	1760	63.9	83.5	37.7	23
1562	1760	68.7	77.4	35	17.9
1171	1760	72.7	68.7	31.2	16.4
781	1760	78.5	60	27.4	15