

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



Pump:

Size: 12MS (1 stage)
 Type: Vertical
 Synch speed: 1760 rpm
 Curve: 12MS
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1760 rpm
 Dia: 9.375 in
 Impeller:
 Ns: 1760
 Nss: ---
 Suction: 8 in
 Discharge: 8 in
 Bowl size: 11.563 in
 Max lateral: 0.75 in
 Thrust K factor: 12.5 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

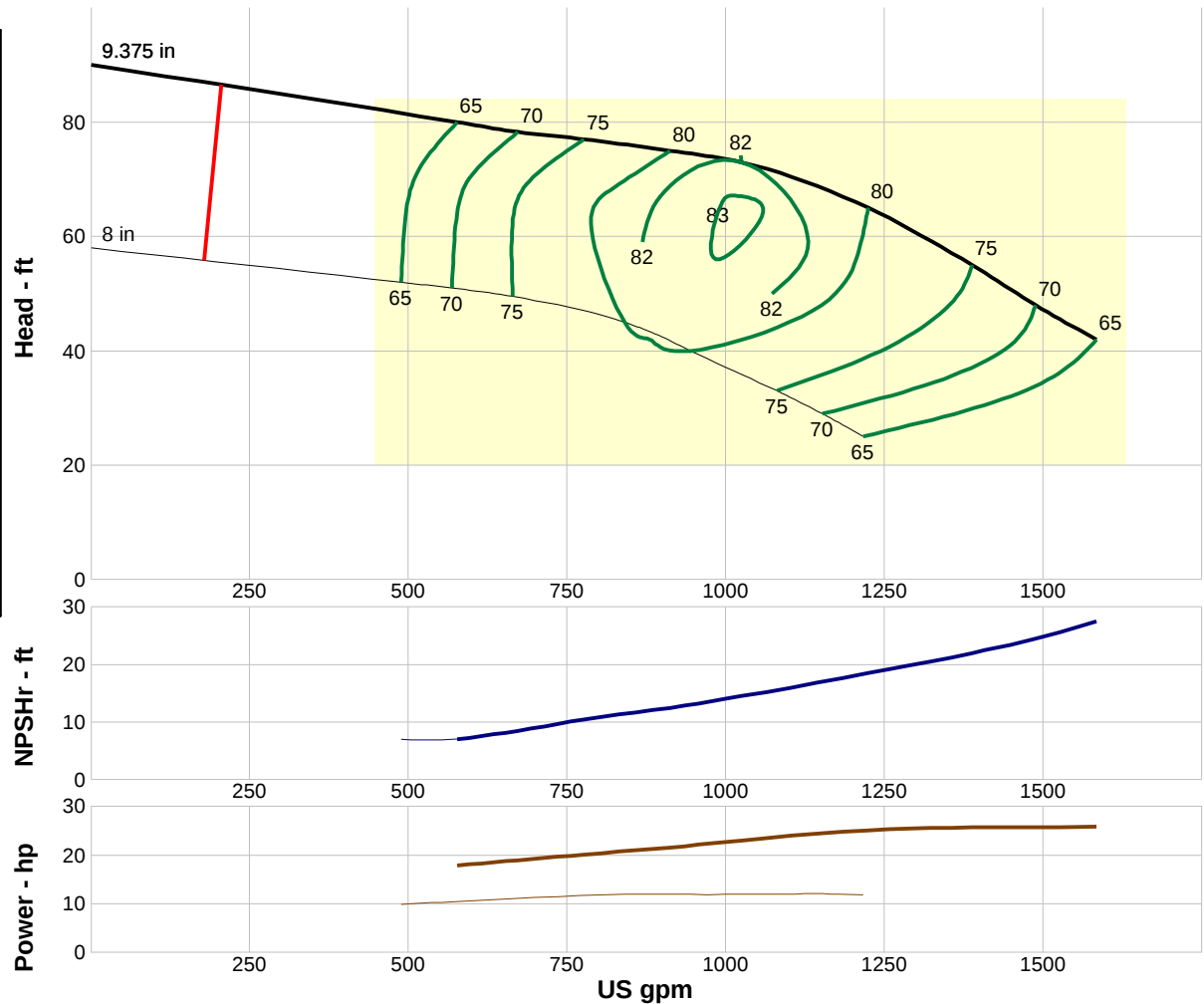
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 584 psi g
 Sphere size: 0.625 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	1024 US gpm
Head:	73 ft
Eff:	82%
Power:	23 hp
NPSHr:	14.5 ft
---- Design Curve ----	
Shutoff head:	90 ft
Shutoff dP:	38.9 psi
Min flow:	205 US gpm
BEP:	82% @ 1024 US gpm
NOL power:	25.8 hp @ 1584 US gpm
-- Max Curve --	
Max power:	25.8 hp @ 1584 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
1520	1760	46	68.3	25.8	25.5
1267	1760	62.4	78.7	25.3	19.4
1014	1760	73.2	81.8	22.9	14.3
760	1760	77.2	74.2	19.9	10.2
507	1760	81.2	61.4	17.1	5.92