

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



Pump:

Size: 12HS (1 stage)
 Type: Vertical
 Synch speed: 1760 rpm
 Curve: 12HS
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1760 rpm
 Dia: 9.563 in
 Impeller:
 Ns: 1760
 Nss: ---
 Suction: 8 in
 Discharge: 8 in
 Bowl size: 11.25 in
 Max lateral: 0.75 in
 Thrust K factor: 19 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

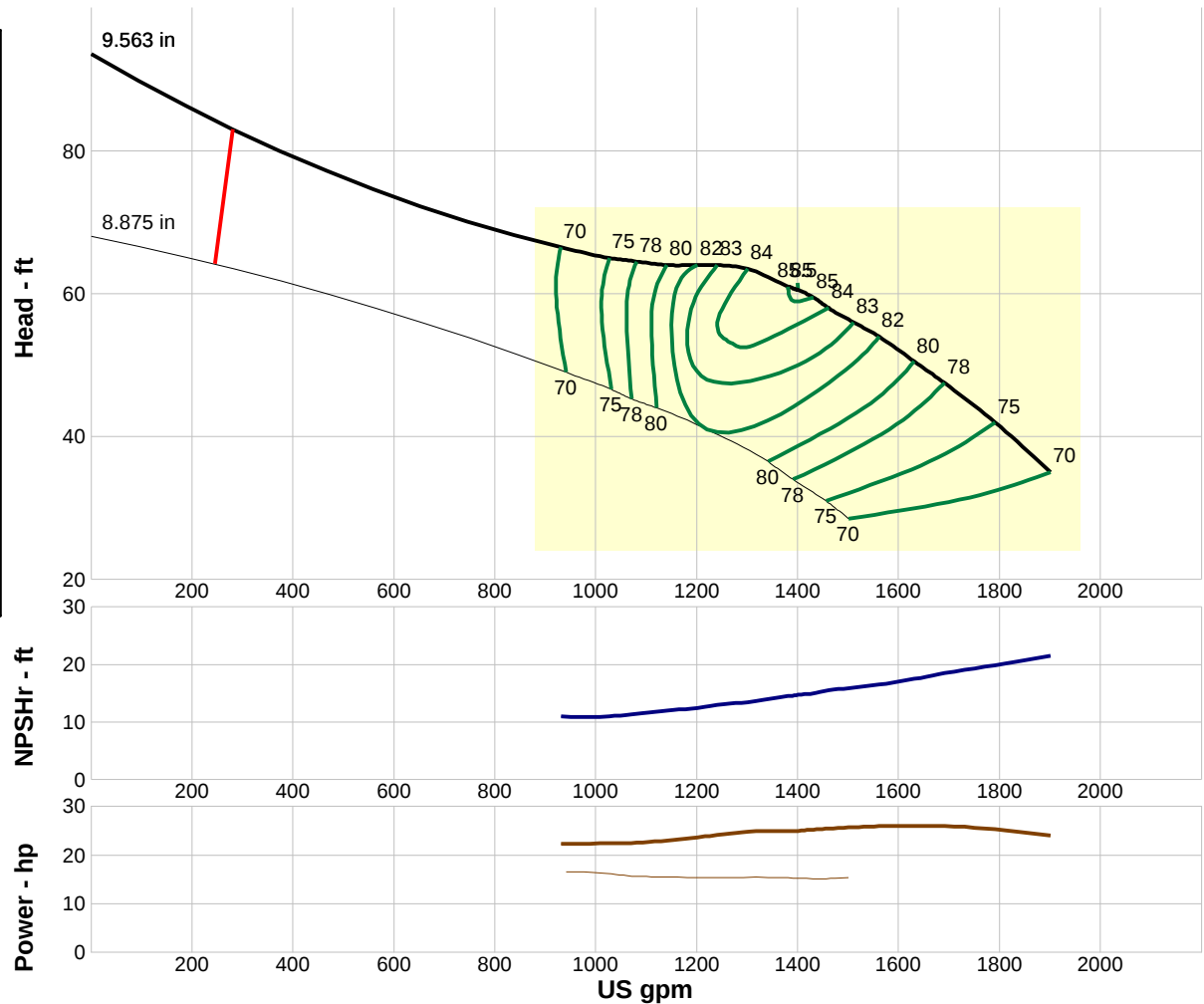
Motor:

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: 0.75 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	1400 US gpm
Head:	60.5 ft
Eff:	85.5%
Power:	25 hp
NPSHr:	14.8 ft
---- Design Curve ----	
Shutoff head:	93.5 ft
Shutoff dP:	40.4 psi
Min flow:	280 US gpm
BEP:	85.5% @ 1400 US gpm
NOL power:	26 hp @ 1690 US gpm
-- Max Curve --	
Max power:	26 hp @ 1690 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
1824	1760	39.8	73.5	24.9	20.4
1520	1760	55.6	82.8	25.8	16.1
1216	1760	64	82.4	23.8	12.7
912	1760	67	69.1	22.3	11
608	1760	75.8	53.2	21.8	11