

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



Pump:

Size: 14HH-1C (1 stage)
 Type: Vertical
 Synch speed: 1160 rpm
 Curve: 14HH-1C
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1160 rpm
 Dia: 9.8125 in
 Impeller:
 Ns: 1160
 Nss: ---
 Suction: 10 in
 Discharge: 10 in
 Bowl size: 14 in
 Max lateral: 0.813 in
 Thrust K factor: 20 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

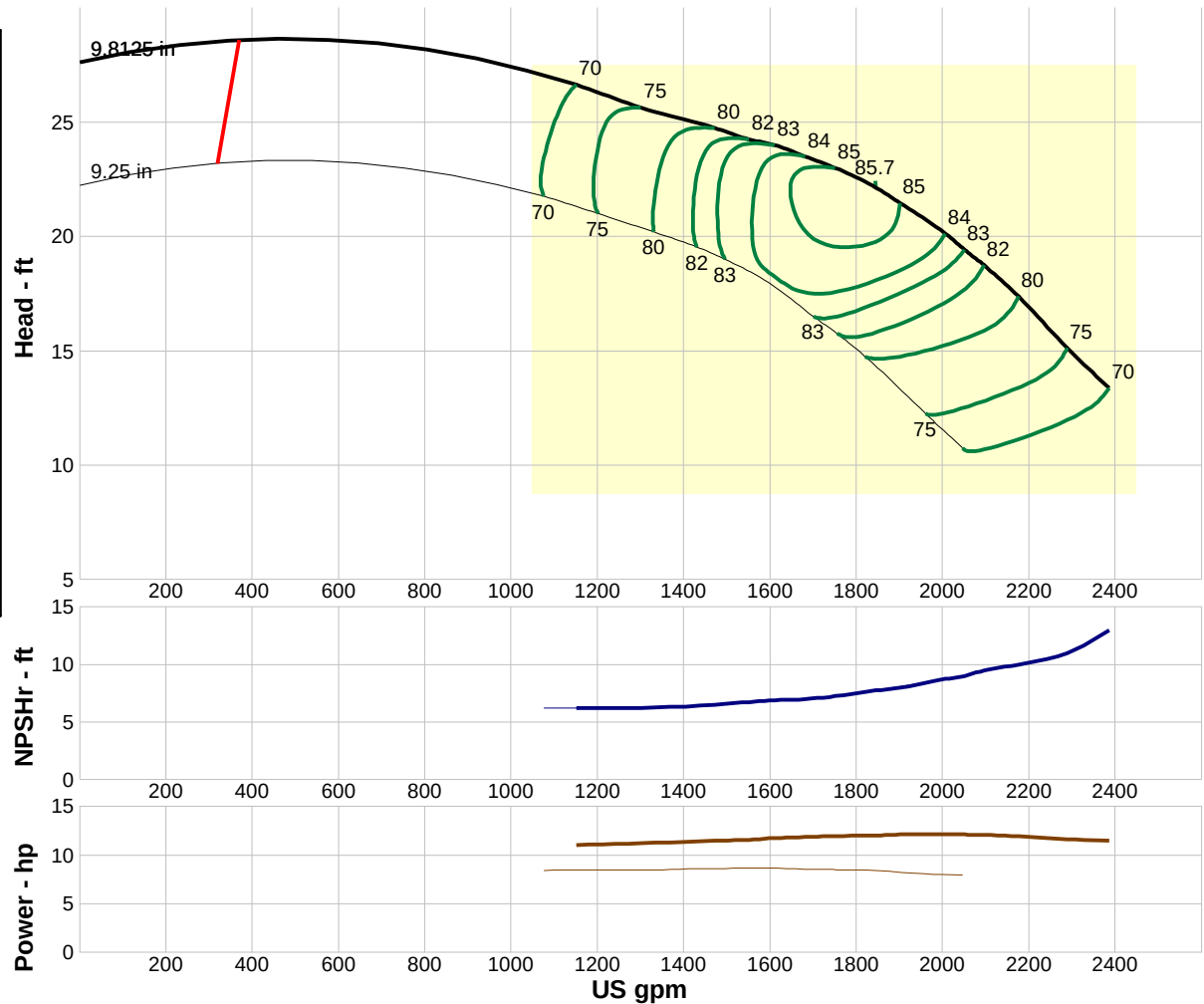
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 200 psi g
 Sphere size: 0.6875 in
 Power: 450 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	1845 US gpm
Head:	22.1 ft
Eff:	85.7%
Power:	12 hp
NPSHr:	7.75 ft
---- Design Curve ----	
Shutoff head:	27.6 ft
Shutoff dP:	11.9 psi
Min flow:	369 US gpm
BEP:	85.7% @ 1845 US gpm
NOL power:	12.1 hp @ 2005 US gpm
-- Max Curve --	
Max power:	12.1 hp @ 2005 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
2290	1160	15.1	74.9	11.6	11.1
1908	1160	21.4	84.9	12.1	8.06
1526	1160	24.4	81.4	11.5	6.67
1145	1160	26.6	69.8	11	6.25
763	1160	27	57.1	10.6	6.25