

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



Pump:

Size: 10HHO (1 stage)
 Type: Vertical
 Synch speed: 1760 rpm
 Curve: 10HHO
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1760 rpm
 Dia: 8.25 in
 Impeller:
 Ns: 1760
 Nss: ---
 Suction: 8 in
 Discharge: 8 in
 Bowl size: 9.875 in
 Max lateral: 0.5 in
 Thrust K factor: 13.5 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

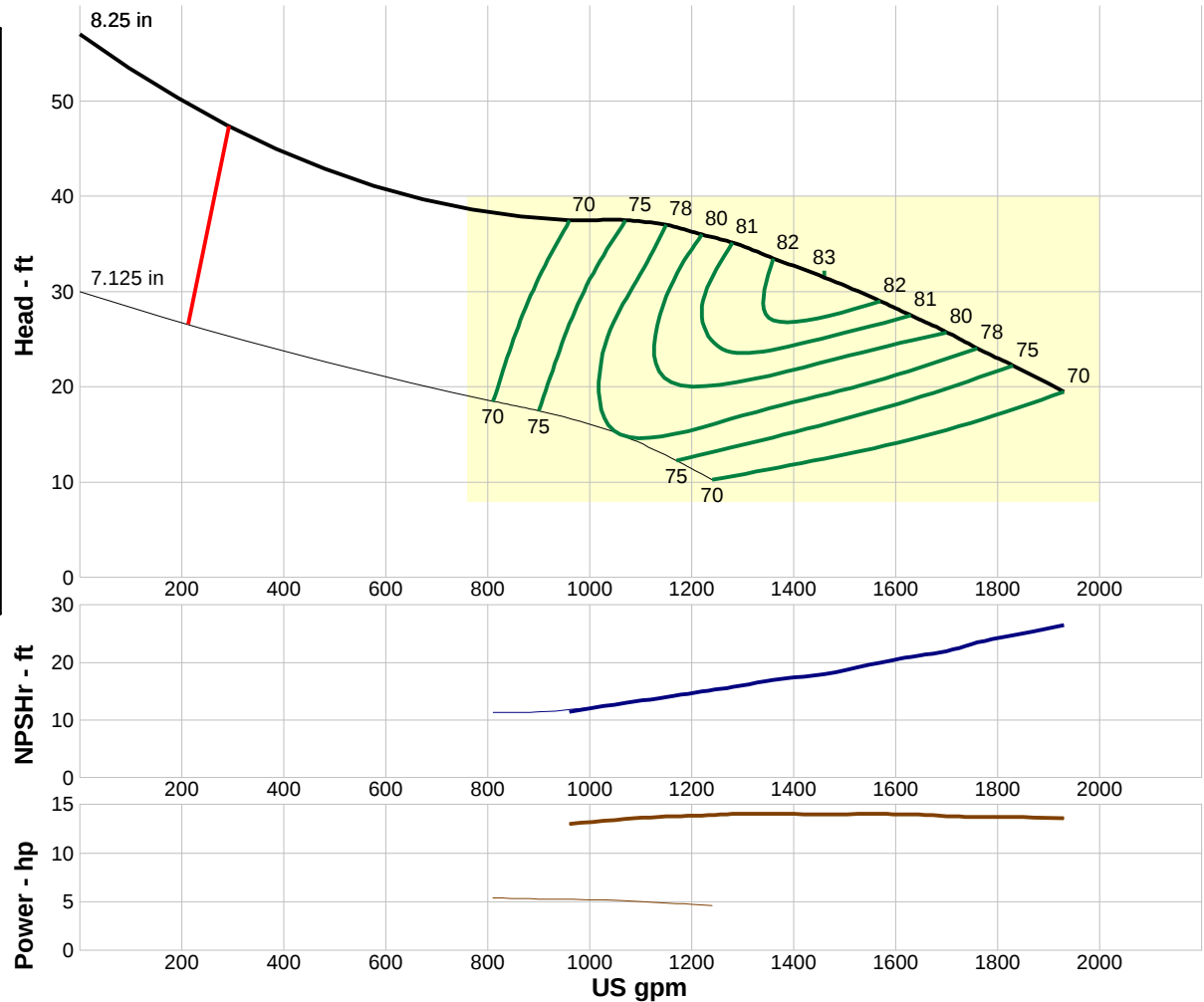
Motor:

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

Pump Limits:

Temperature: 140 °F
 Pressure: 455 psi g
 Sphere size: 1.438 in
 Power: 150 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	1460 US gpm
Head:	31.5 ft
Eff:	83%
Power:	14 hp
NPSHr:	18 ft
---- Design Curve ----	
Shutoff head:	57 ft
Shutoff dP:	24.6 psi
Min flow:	292 US gpm
BEP:	83% @ 1460 US gpm
NOL power:	14 hp @ 1360 US gpm
-- Max Curve --	
Max power:	14 hp @ 1360 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
1853	1760	21.6	73.8	13.7	25.2
1544	1760	29.6	82.2	14	19.5
1235	1760	35.8	80.3	13.9	15.2
926	1760	38.2	68.5	12.8	11
618	1760	44.4	54.5	11.4	6.84