

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 23HM.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 900 rpm
 Curve:
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 885 rpm
 Dia: 13.92 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: 29 in
 Discharge: 24 in
 Bowl size: 23 in
 Max lateral: 0.88 in
 Thrust K factor: 69 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

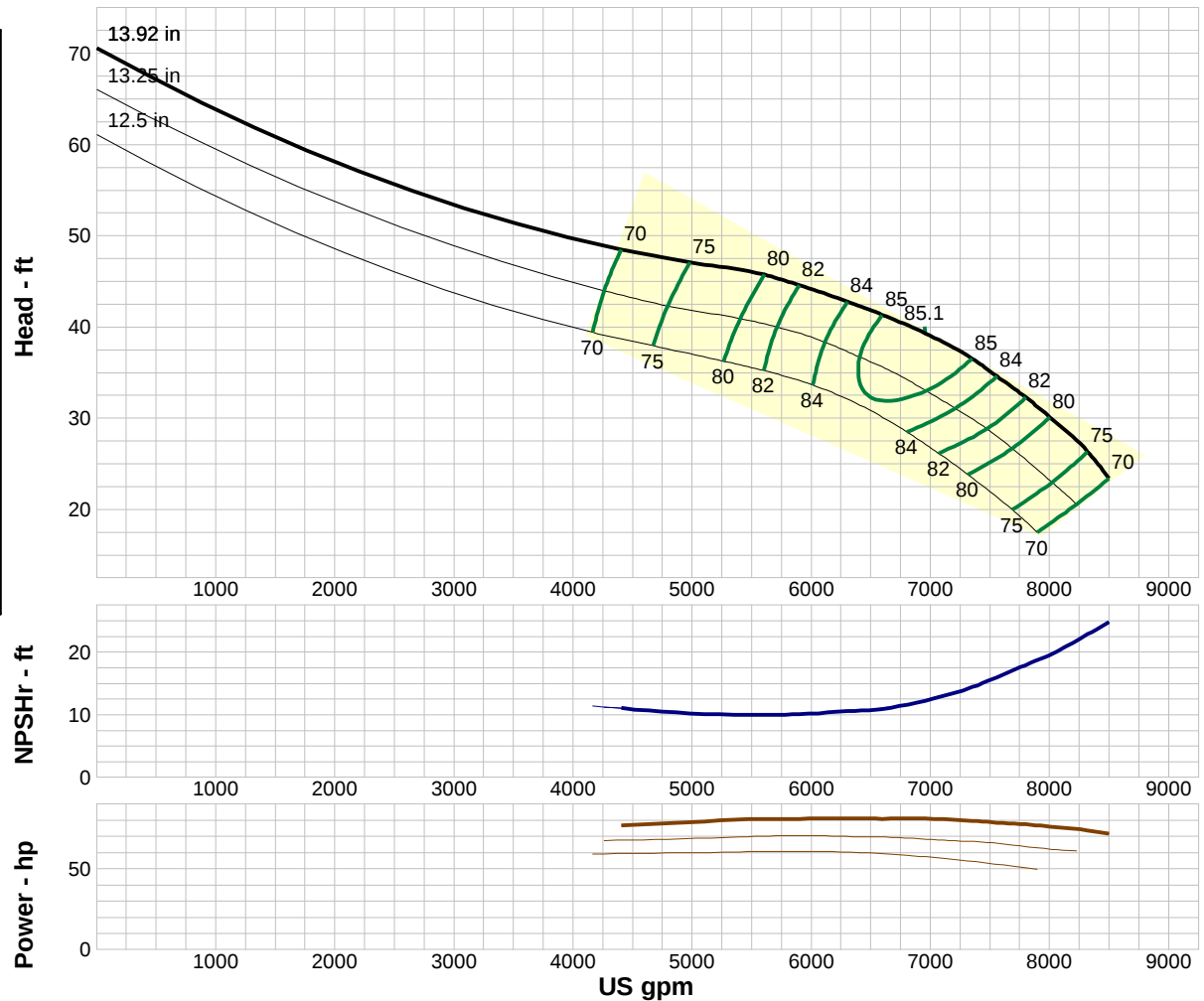
Motor:

Standard: NEMA
 Enclosure: TEFC
 Sizing criteria: Max Power on Design Curve
 Size: 100 hp
 Speed: 900
 Frame: 445T

Pump Limits:

Temperature: 150 °F
 Pressure: --- psi g
 Sphere size: 1.81 in
 Power: 561 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	6950 US gpm
Head:	39.3 ft
Eff:	85.1%
Power:	81.1 hp
NPSHr:	12.3 ft
---- Design Curve ----	
Shutoff head:	70.6 ft
Shutoff dP:	30.5 psi
Min flow:	--- US gpm
BEP:	85.1% @ 6950 US gpm
NOL power:	81.1 hp @ 6950 US gpm
-- Max Curve --	
Max power:	81.1 hp @ 6950 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
8156	885	28.2	77.5	74.9	21.2
6797	885	40.2	85.1	81	11.7
5438	885	46.1	78.7	80.4	10.1
4078	885	---	---	---	---
2719	885	---	---	---	---