

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: 1200 rpm
 Curve:
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1185 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

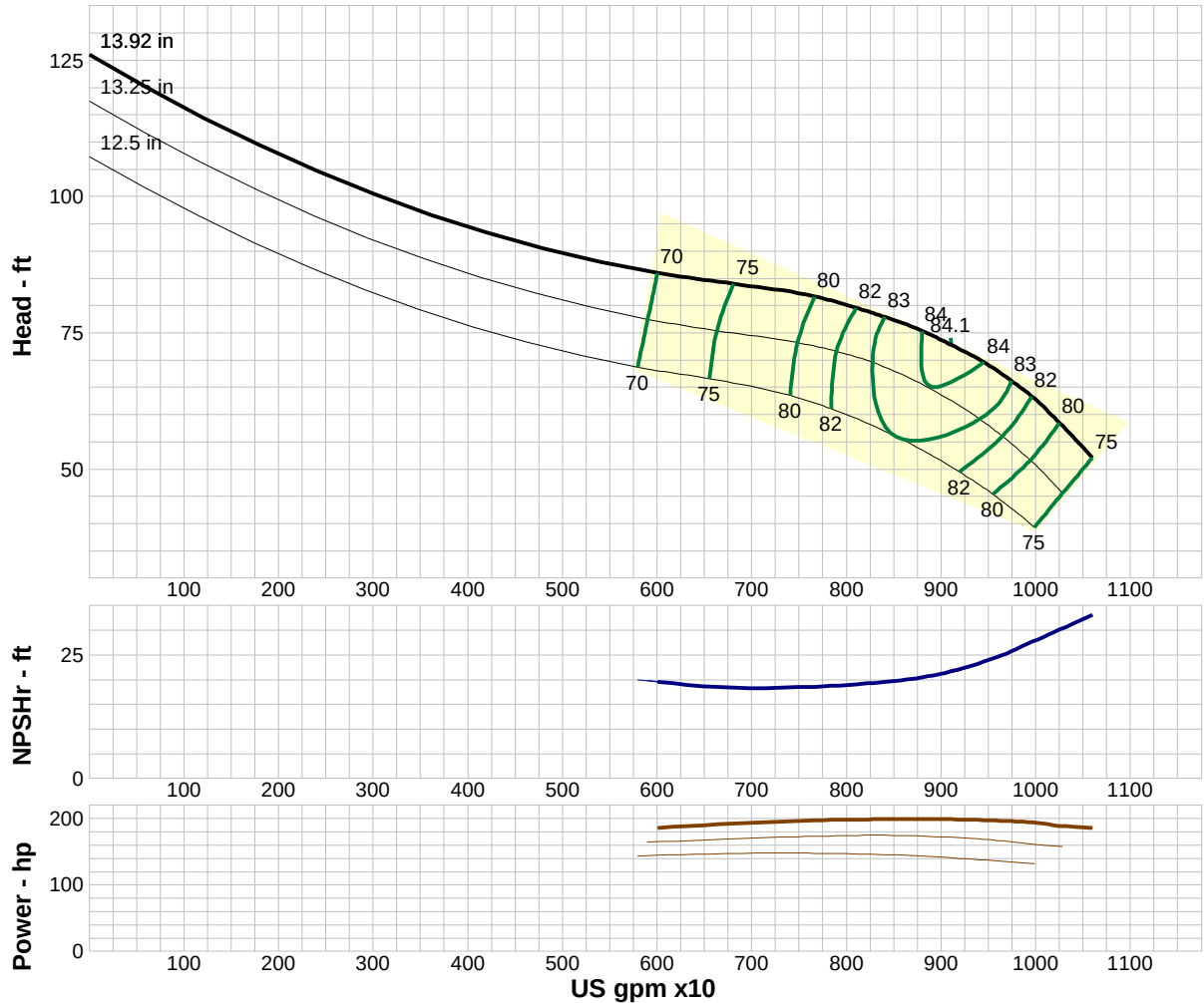
Motor:

Standard: NEMA
 Enclosure: TEFC
 Sizing criteria: Max Power on Design Curve
 Size: 200 hp
 Speed: 1200
 Frame: 447T

Pump Limits:

Temperature: 150 °F
 Pressure: --- psi g
 Sphere size: 1.81 in
 Power: 689 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	9100 US gpm
Head:	72.8 ft
Eff:	84.1%
Power:	199 hp
NPSHr:	21.7 ft
---- Design Curve ----	
Shutoff head:	126 ft
Shutoff dP:	54.5 psi
Min flow:	--- US gpm
BEP:	84.1% @ 9100 US gpm
NOL power:	199 hp @ 8794 US gpm
-- Max Curve --	
Max power:	199 hp @ 8794 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
10171	1185	59.7	80.5	190	29.5
8476	1185	77.4	83.2	199	19.7
6781	1185	84	74.9	192	18.4
5086	1185	---	---	---	---
3390	1185	---	---	---	---