

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 38B.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 900 rpm
 Curve: 09-081
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 880 rpm
 Dia: 25.12 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: --- in
 Discharge: 20 in
 Bowl size: 34.25 in
 Max lateral: 0.76 in
 Thrust K factor: 74 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

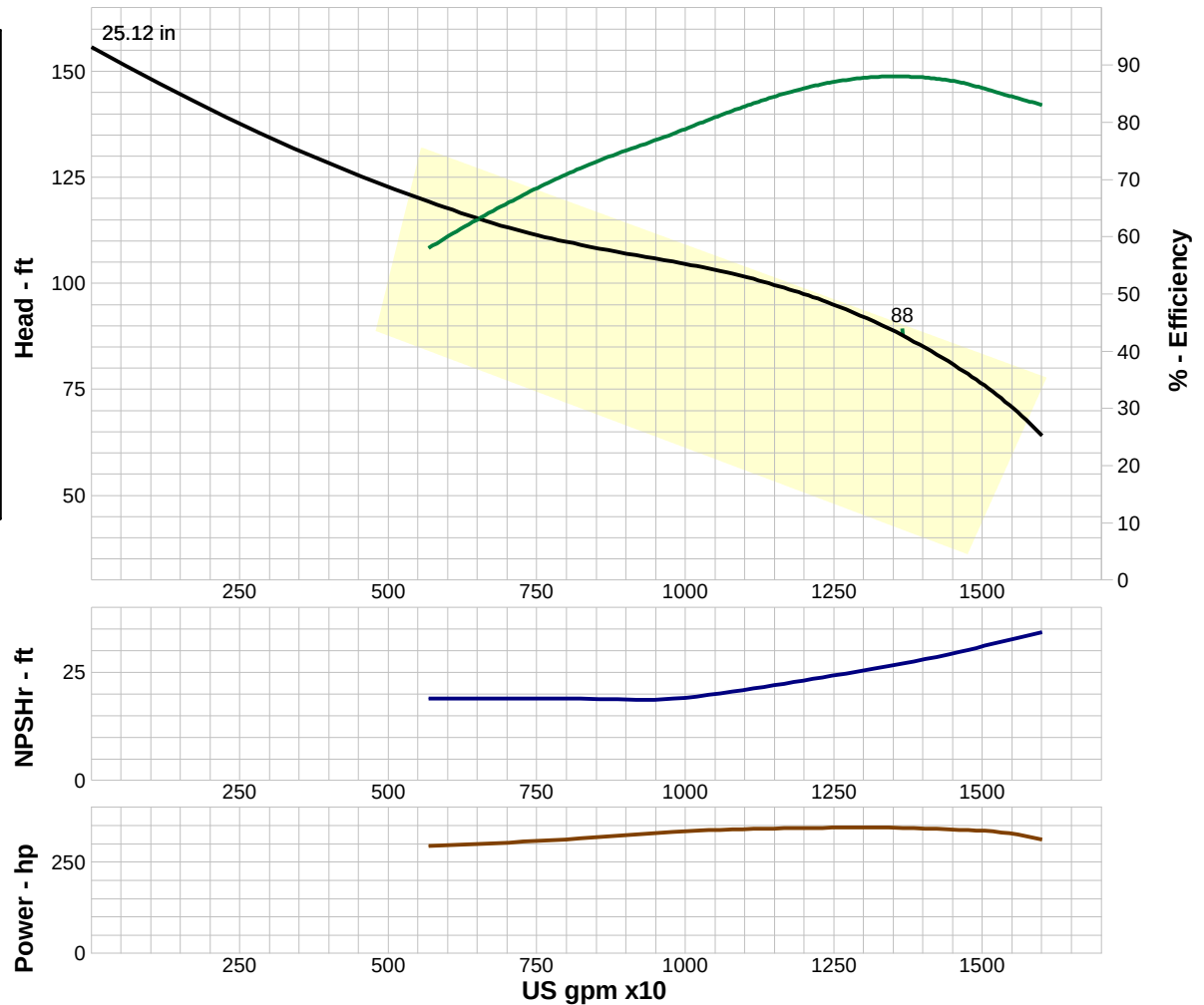
Motor:

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

Pump Limits:

Temperature: 150 °F
 Pressure: 320 psi g
 Sphere size: 2.5 in
 Power: 1489 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	13650 US gpm
Head:	87.7 ft
Eff:	88%
Power:	344 hp
NPSHr:	27 ft
---- Design Curve ----	
Shutoff head:	156 ft
Shutoff dP:	67.3 psi
Min flow:	--- US gpm
BEP:	88% @ 13650 US gpm
NOL power:	344 hp @ 12461 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
15360	880	72.3	84.8	330	32.2
12800	880	93	87.3	344	25
10240	880	104	79.8	336	19.7
7680	880	111	69.3	310	18.9
5120	880	123	54.8	291	18.9