

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 38A.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 900 rpm
 Curve: 09-066A
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 880 rpm
 Dia: 24.06 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: --- in
 Discharge: 20.24 in
 Bowl size: 34.25 in
 Max lateral: 1.12 in
 Thrust K factor: 86 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

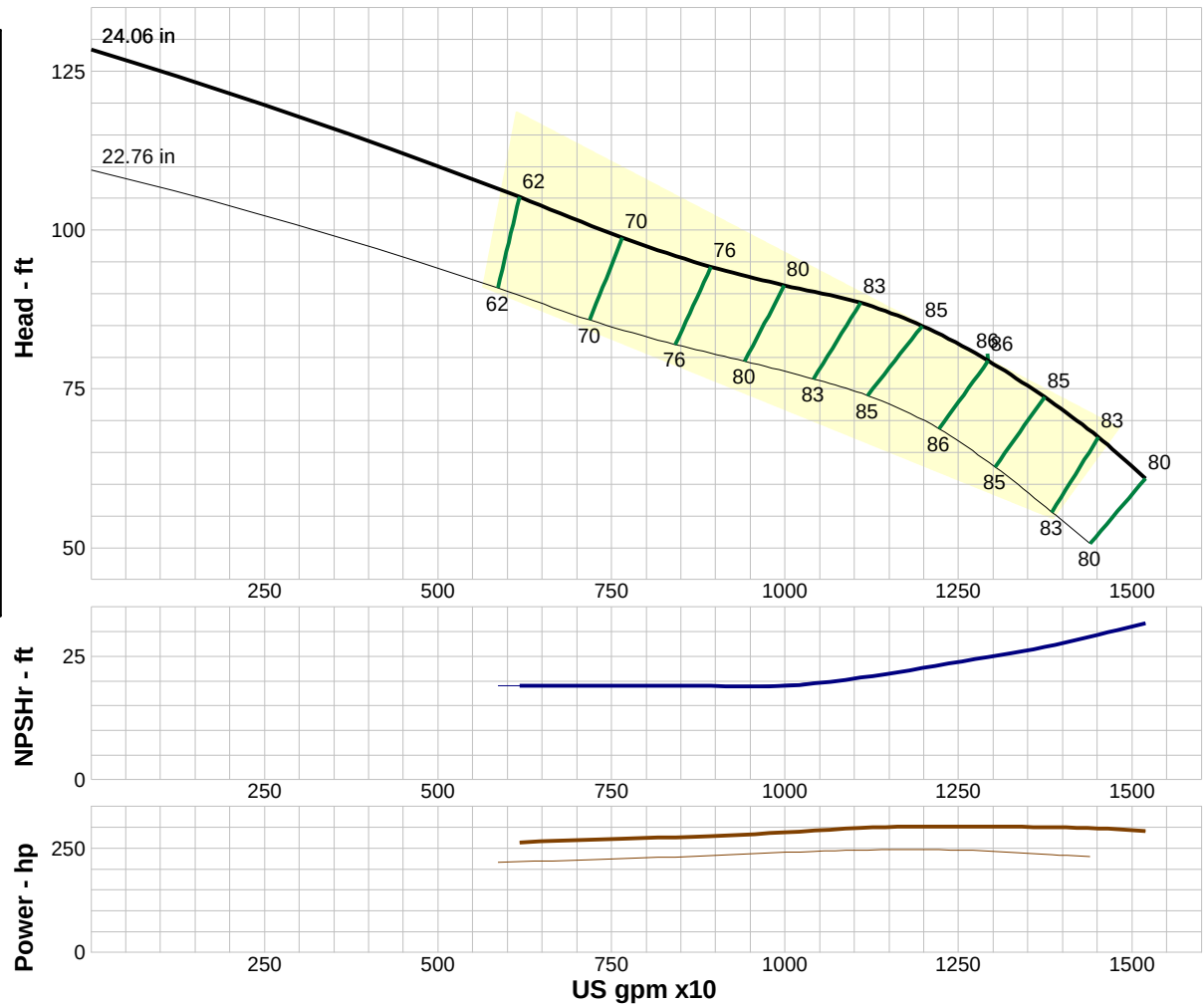
Motor:

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:	12921 US gpm
Head:	79.4 ft
Eff:	86%
Power:	301 hp
NPSHr:	24.9 ft
---- Design Curve ----	
Shutoff head:	128 ft
Shutoff dP:	55.5 psi
Min flow:	--- US gpm
BEP:	86% @ 12921 US gpm
NOL power:	302 hp @ 11971 US gpm
-- Max Curve --	
Max power:	302 hp @ 11971 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
14575	880	66.8	82.7	297	29.7
12146	880	83.9	85.2	302	23
9717	880	92	79	286	19
7288	880	100	68.1	271	19
4858	880	---	---	---	---