

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 30E.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 1200 rpm
 Curve: 12-248
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1180 rpm
 Dia: 21.4 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: 27.25 in
 Discharge: 20 in
 Bowl size: 27.75 in
 Max lateral: 1 in
 Thrust K factor: 65 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

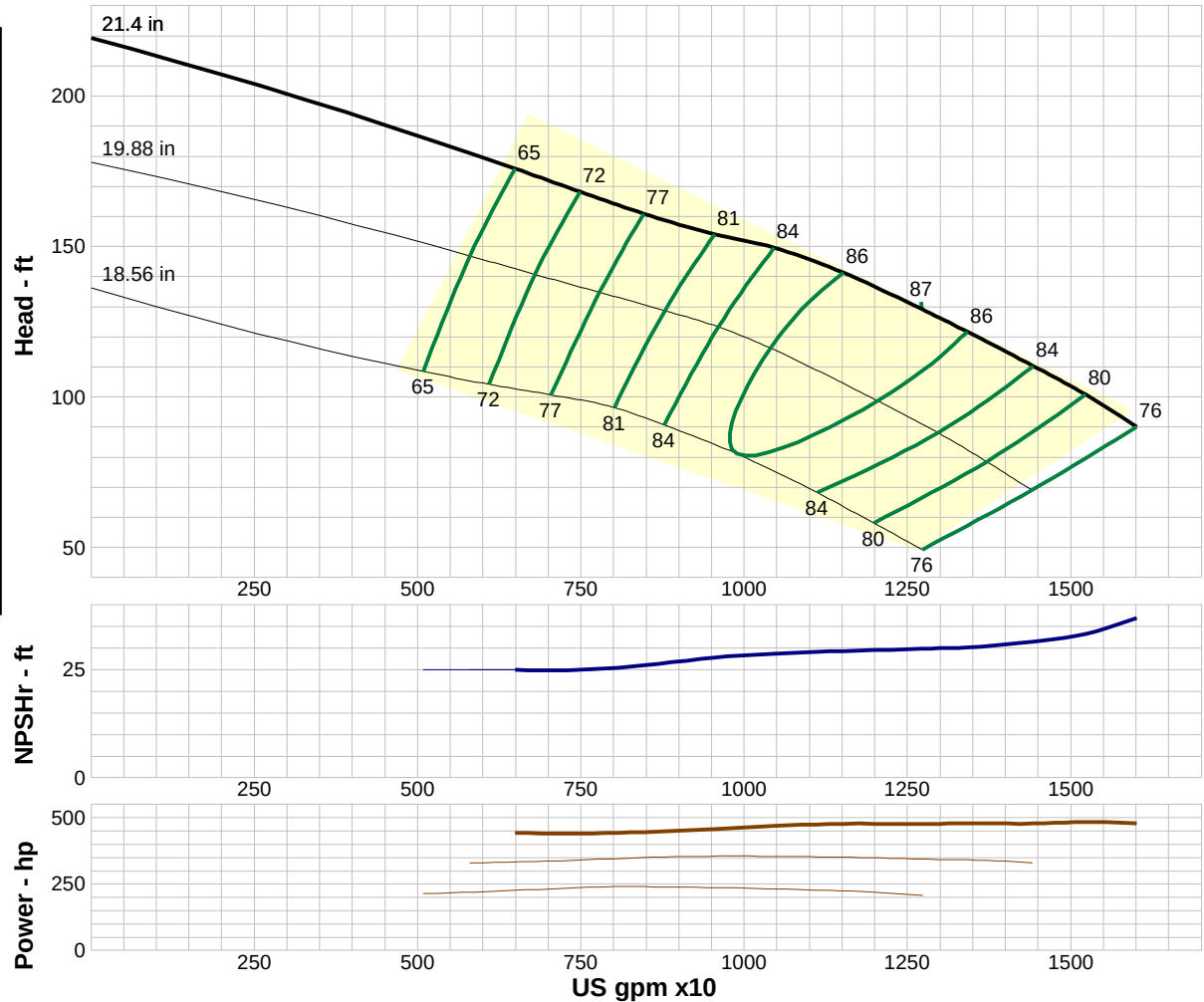
Motor:

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

Pump Limits:

Temperature: 150 °F
 Pressure: 300 psi g
 Sphere size: 2.36 in
 Power: 1574 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	12708 US gpm
Head:	129 ft
Eff:	87%
Power:	477 hp
NPSHr:	29.9 ft
---- Design Curve ----	
Shutoff head:	219 ft
Shutoff dP:	94.8 psi
Min flow:	--- US gpm
BEP:	87% @ 12708 US gpm
NOL power:	484 hp @ 15218 US gpm
-- Max Curve --	
Max power:	484 hp @ 15218 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
15362	1180	98.8	79.3	483	34
12802	1180	128	86.9	477	29.9
10242	1180	151	83.3	467	28.5
7681	1180	167	73	442	25.2
5121	1180	185	55.4	445	25