

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 22A.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 1200 rpm
 Curve: 12-193
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1180 rpm
 Dia: 17.05 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: 22.5 in
 Discharge: 16 in
 Bowl size: 21.5 in
 Max lateral: 0.56 in
 Thrust K factor: 40 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

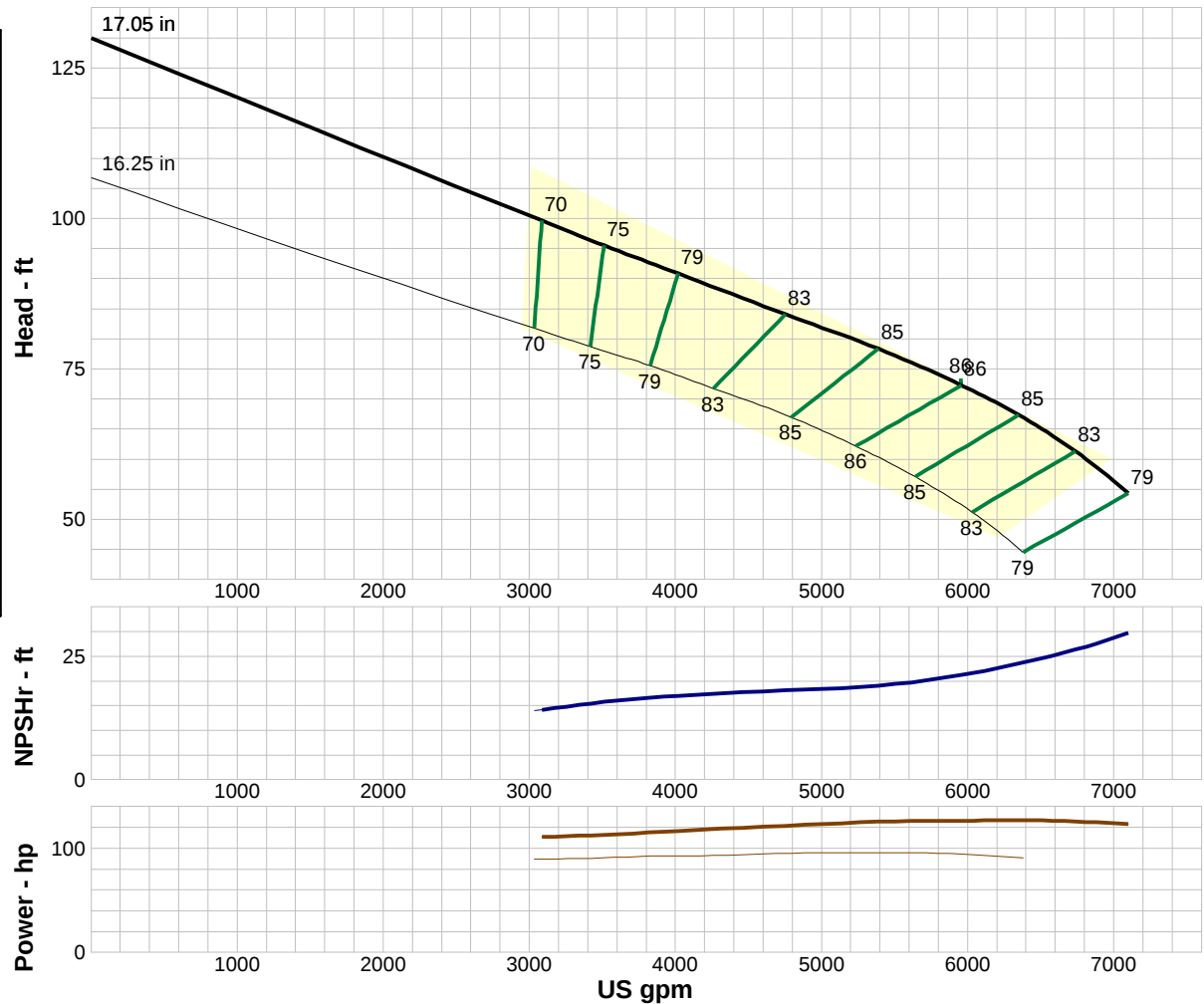
Motor:

Standard: NEMA
 Enclosure: TEFC
 Sizing criteria: Max Power on Design Curve
 Size: 150 hp
 Speed: 1200
 Frame: 447T

Pump Limits:

Temperature: 150 °F
 Pressure: 350 psi g
 Sphere size: 1.42 in
 Power: 1010 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	5954 US gpm
Head:	72.3 ft
Eff:	86%
Power:	126 hp
NPSHr:	21.2 ft
---- Design Curve ----	
Shutoff head:	130 ft
Shutoff dP:	56.2 psi
Min flow:	--- US gpm
BEP:	86% @ 5954 US gpm
NOL power:	127 hp @ 6345 US gpm
-- Max Curve --	
Max power:	127 hp @ 6345 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
6814	1180	59.8	82.1	125	27.1
5678	1180	75.2	85.5	126	20.2
4542	1180	86	81.9	120	17.8
3407	1180	96.5	73.8	112	15.4
2271	1180	---	---	---	---