

Company: Bonneville Power Administration
 Name:
 Date: 2/8/2007
 Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 22B.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 1200 rpm
 Curve: 12-194
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1180 rpm
 Dia: 17 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: 22.5 in
 Discharge: 16 in
 Bowl size: 21.5 in
 Max lateral: 0.56 in
 Thrust K factor: 44 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

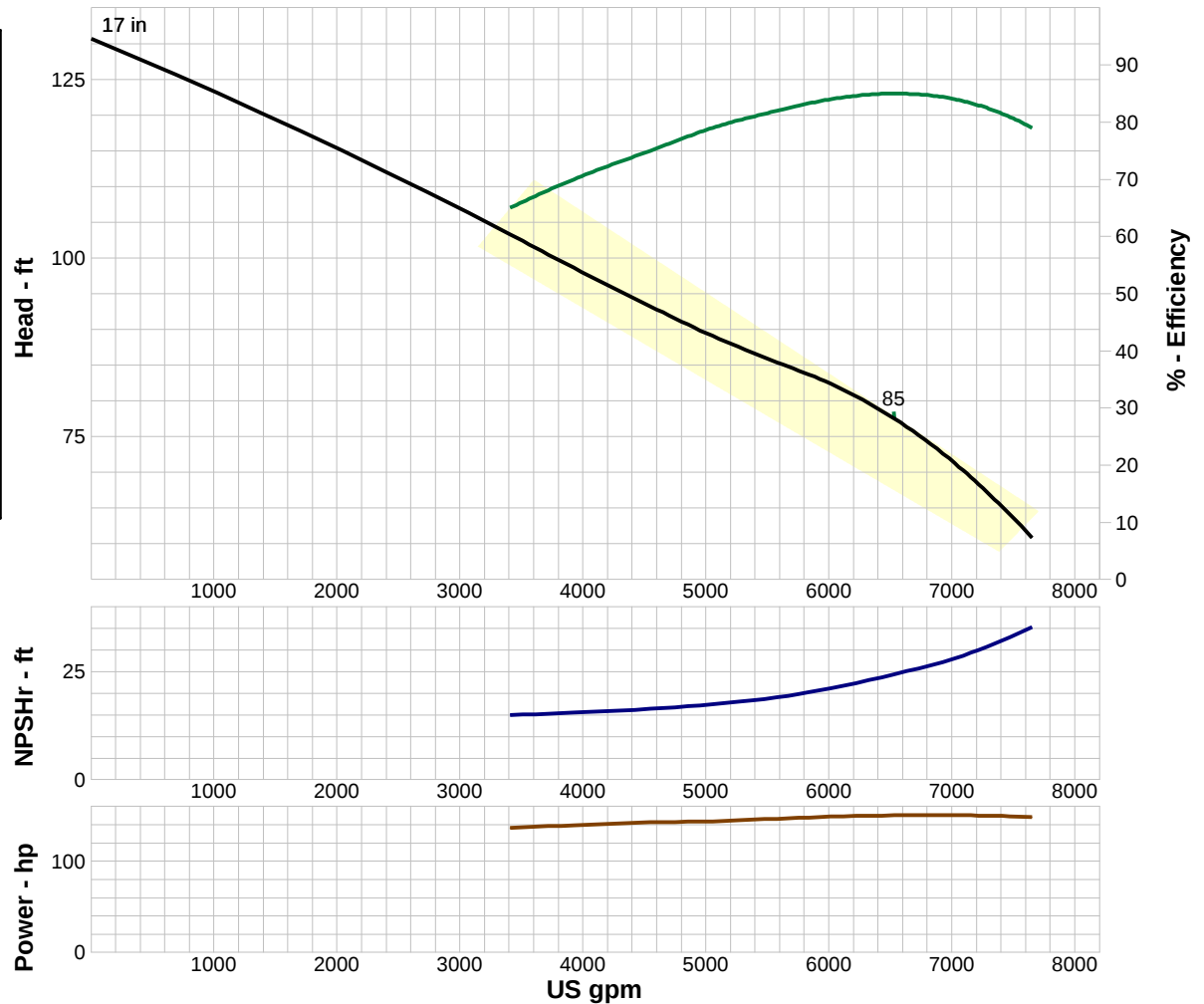
Motor:

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:	6529 US gpm
Head:	77.5 ft
Eff:	85%
Power:	150 hp
NPSHr:	24.5 ft
---- Design Curve ----	
Shutoff head:	131 ft
Shutoff dP:	56.5 psi
Min flow:	--- US gpm
BEP:	85% @ 6529 US gpm
NOL power:	150 hp @ 7022 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
7343	1180	66.2	82	150	31.5
6119	1180	81.4	84.2	149	21.9
4895	1180	90.4	77.8	143	17.2
3671	1180	101	67.6	138	15.3
2448	1180	---	---	---	---