

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 27M.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 900 rpm
 Curve:
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 880 rpm
 Dia: 17.76 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: 28.11 in
 Discharge: 20 in
 Bowl size: 26.6 in
 Max lateral: 1.25 in
 Thrust K factor: 48.63 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

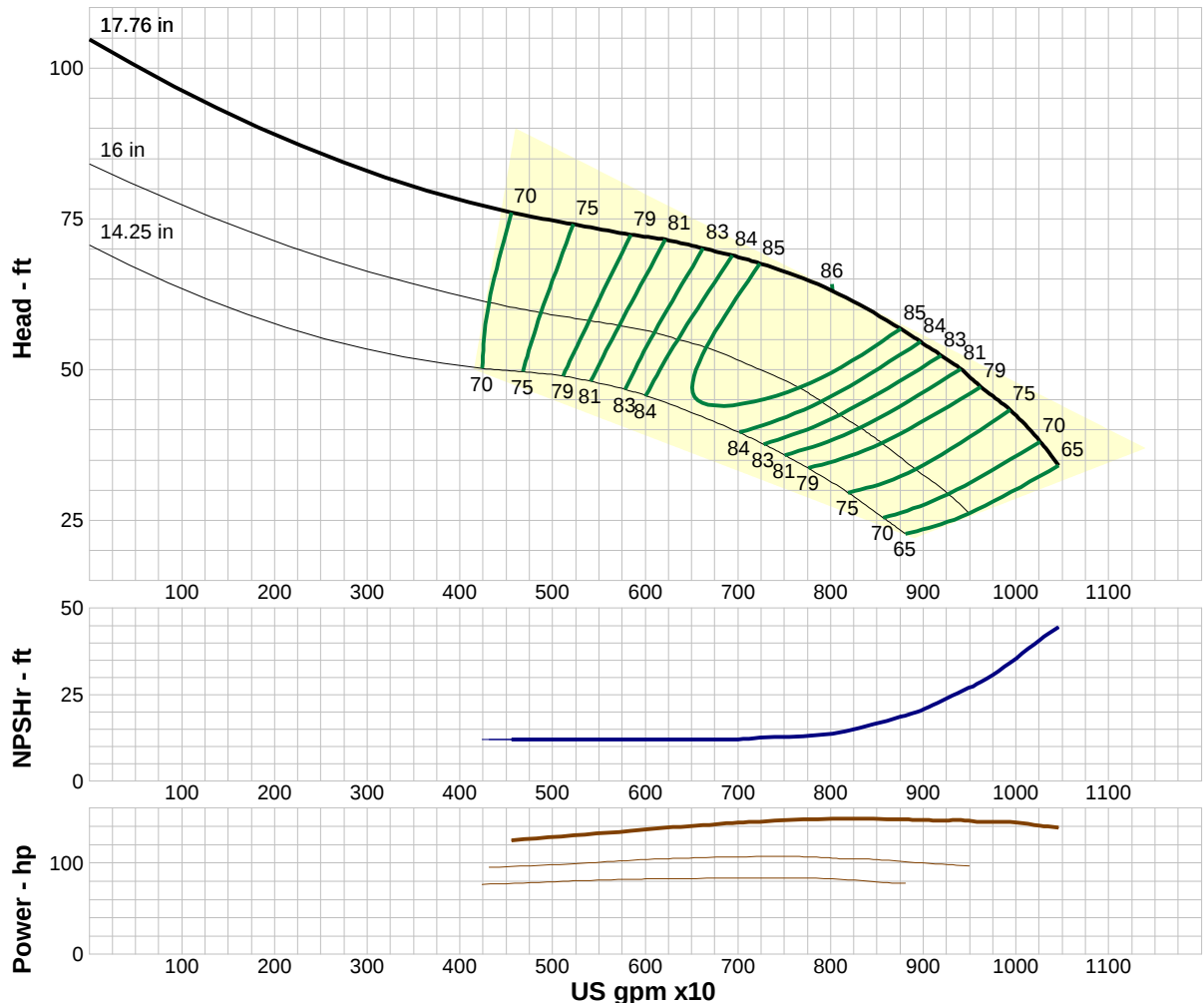
Motor:

Standard: NEMA
 Enclosure: TEFC
 Sizing criteria: Max Power on Design Curve
 Size: 150 hp
 Speed: 900
 Frame: 449T

Pump Limits:

Temperature: 150 °F
 Pressure: 377 psi g
 Sphere size: 2.75 in
 Power: 1184 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	8013 US gpm
Head:	63.1 ft
Eff:	86%
Power:	148 hp
NPSHr:	13.8 ft
---- Design Curve ----	
Shutoff head:	105 ft
Shutoff dP:	45.3 psi
Min flow:	--- US gpm
BEP:	86% @ 8013 US gpm
NOL power:	148 hp @ 8013 US gpm
-- Max Curve --	
Max power:	148 hp @ 8013 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
10034	880	41.7	73.4	144	36.4
8362	880	60.1	85.5	148	16.1
6690	880	69.8	83.2	142	12
5017	880	74.7	73.5	129	12
3345	880	---	---	---	---