

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 42A.1+ (1 stage)
 Type: VERT.TURBINE
 Synch speed: 720 rpm
 Curve: 07-066
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 710 rpm
 Dia: 27.42 in
 Impeller:
 Ns: ---
 Nss: ---
 Suction: --- in
 Discharge: 30 in
 Bowl size: 40 in
 Max lateral: 1 in
 Thrust K factor: 100 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

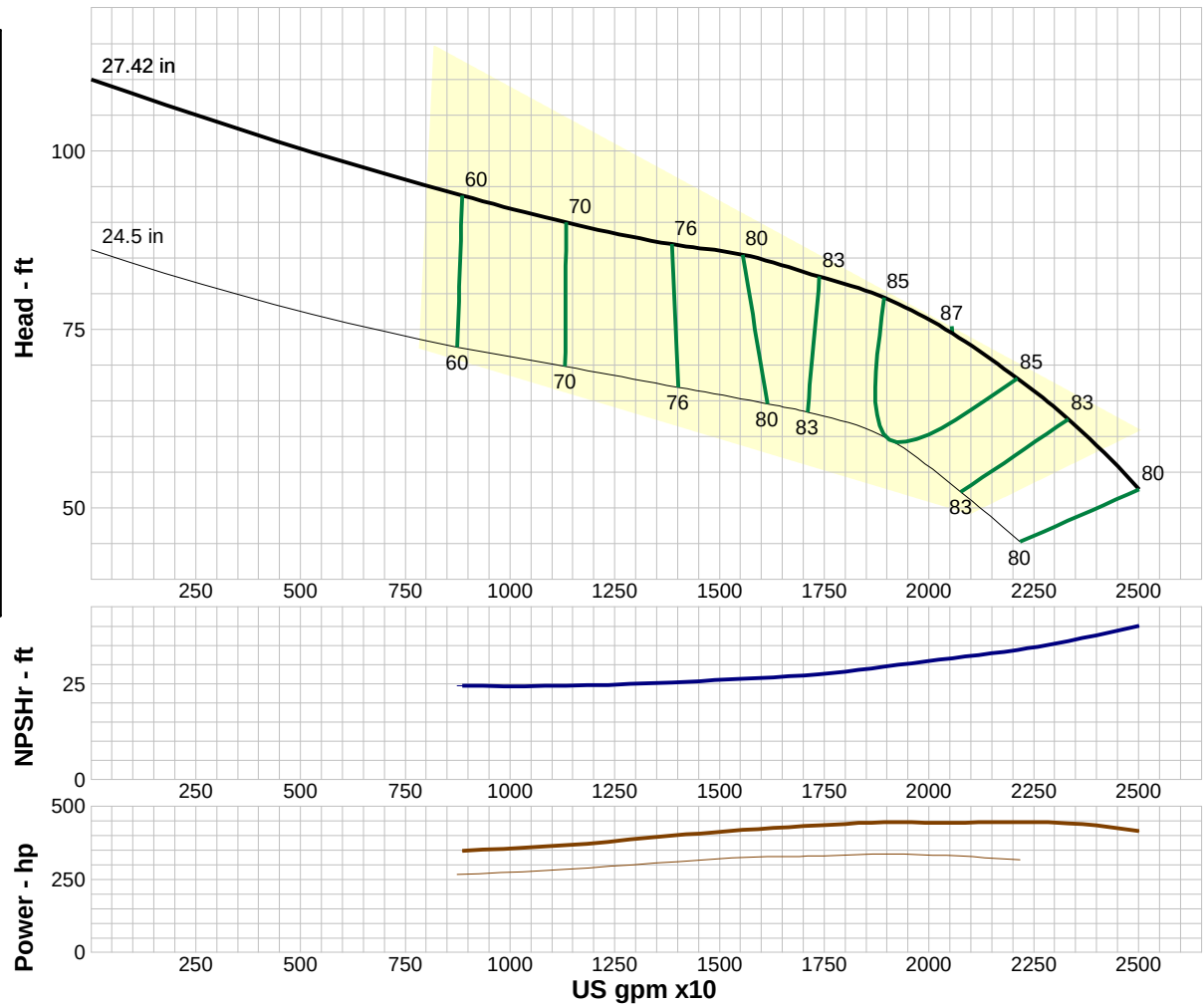
Motor:

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

Pump Limits:

Temperature: 150 °F
 Pressure: 310 psi g
 Sphere size: 1.5 in
 Power: 1475 hp
 Eye area: --- in²

---- Data Point ----	
Flow:	20546 US gpm
Head:	74.4 ft
Eff:	87%
Power:	444 hp
NPSHr:	31.7 ft
---- Design Curve ----	
Shutoff head:	110 ft
Shutoff dP:	47.6 psi
Min flow:	--- US gpm
BEP:	87% @ 20546 US gpm
NOL power:	447 hp @ 22090 US gpm
-- Max Curve --	
Max power:	447 hp @ 22090 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
24007	710	58.4	81.8	432	37.8
20006	710	76.1	86.3	445	31
16005	710	84.7	80.8	423	26.6
12004	710	89.1	71.6	376	24.7
8002	710	95.3	56.6	343	24.5