

Company: Bonneville Power Administration

Name:

Date: 2/8/2007

Selection: Missing Fairbanks Vertical Turbines



Pump:

Size: 44B.1+ (1 stage)

Type: VERT.TURBINE

Synch speed: 720 rpm

Curve: 07-071

Specific Speeds:

Dimensions:

Vertical Turbine:

Speed: 715 rpm

Dia: 31.94 in

Impeller:

Ns: ---

Nss: ---

Suction: 43 in
Discharge: 30 in

Bowl size: 43 in
Max lateral: 1.5 in
Thrust K factor: 159 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

--- hp

Speed: ---

Frame: ---

Sizing criteria: Max Power on Design Curve

Pump Limits:

Temperature: 150 °F

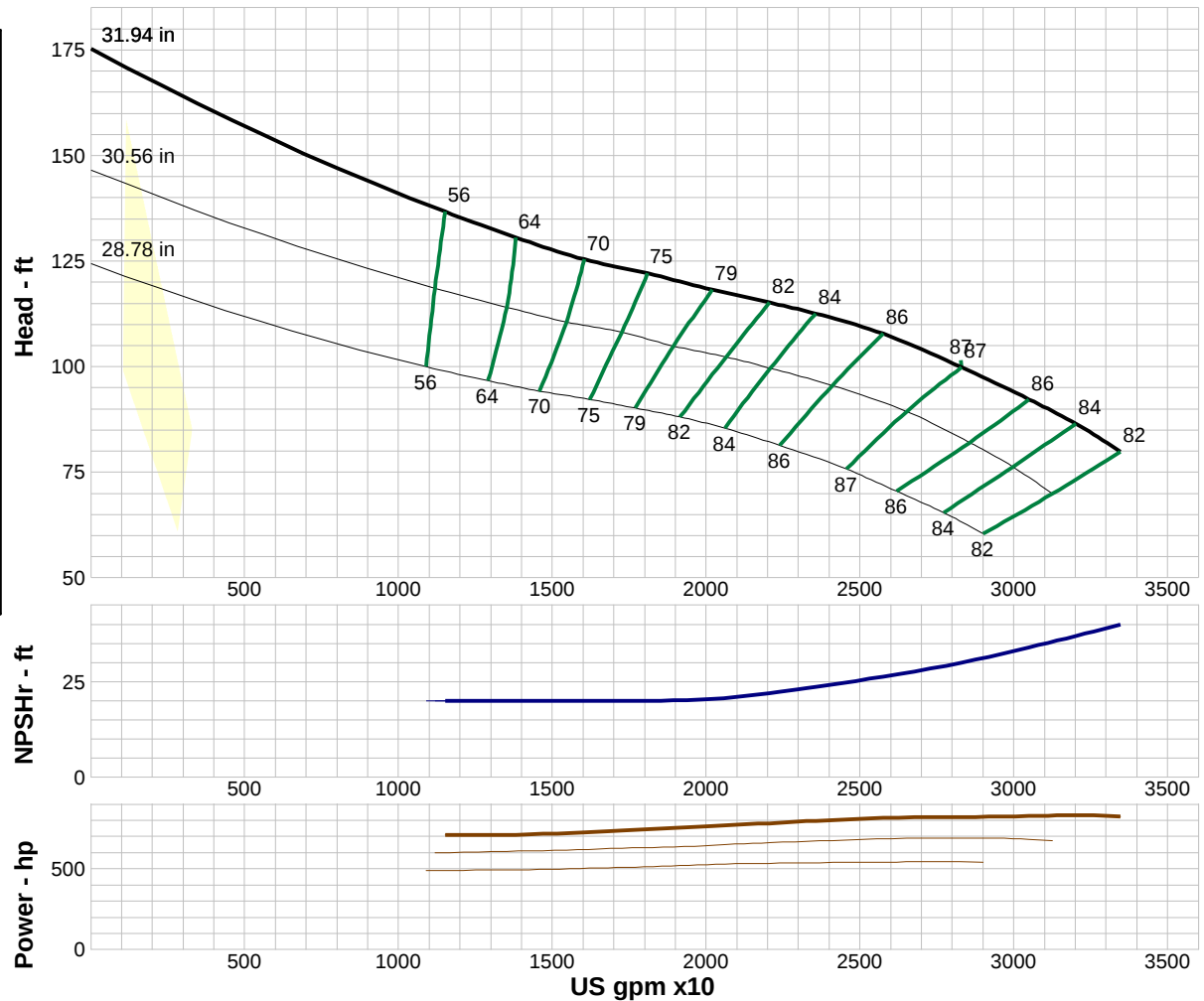
Pressure: 350 psi g

Sphere size: 3.75 in

Power: 1475 hp

Eye area: --- in²

---- Data Point ----	
Flow:	28290 US gpm
Head:	99.8 ft
Eff:	87%
Power:	820 hp
NPSHr:	30 ft
---- Design Curve ----	
Shutoff head:	175 ft
Shutoff dP:	75.8 psi
Min flow:	--- US gpm
BEP:	87% @ 28290 US gpm
NOL power:	832 hp @ 32000 US gpm
-- Max Curve --	
Max power:	832 hp @ 32000 US gpm



Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
32102	715	86	83.9	831	37.2
26752	715	105	86.4	817	27.8
21402	715	116	81	775	21.5
16051	715	125	70.1	725	20
10701	715	139	53.2	708	20