

Company: Bonneville Power Administration

Name:

Date: 11/25/2006



#### Pump:

Size: H14P (1 stage)  
 Type: AxialFlow  
 Synch speed: 1160 rpm  
 Curve: H14P  
 Specific Speeds:  
 Dimensions:  
 Speed: 1160 rpm  
 Dia: 5 in  
 Impeller:  
 Ns: 1160  
 Nss: ---  
 Suction: --- in  
 Discharge: --- in

#### Pump Limits:

Temperature: 140 °F  
 Pressure: --- psi g  
 Sphere size: 2 in  
 Power: 150 hp  
 Eye area: --- in<sup>2</sup>

#### Search Criteria:

Flow: --- US gpm  
 Head: --- ft

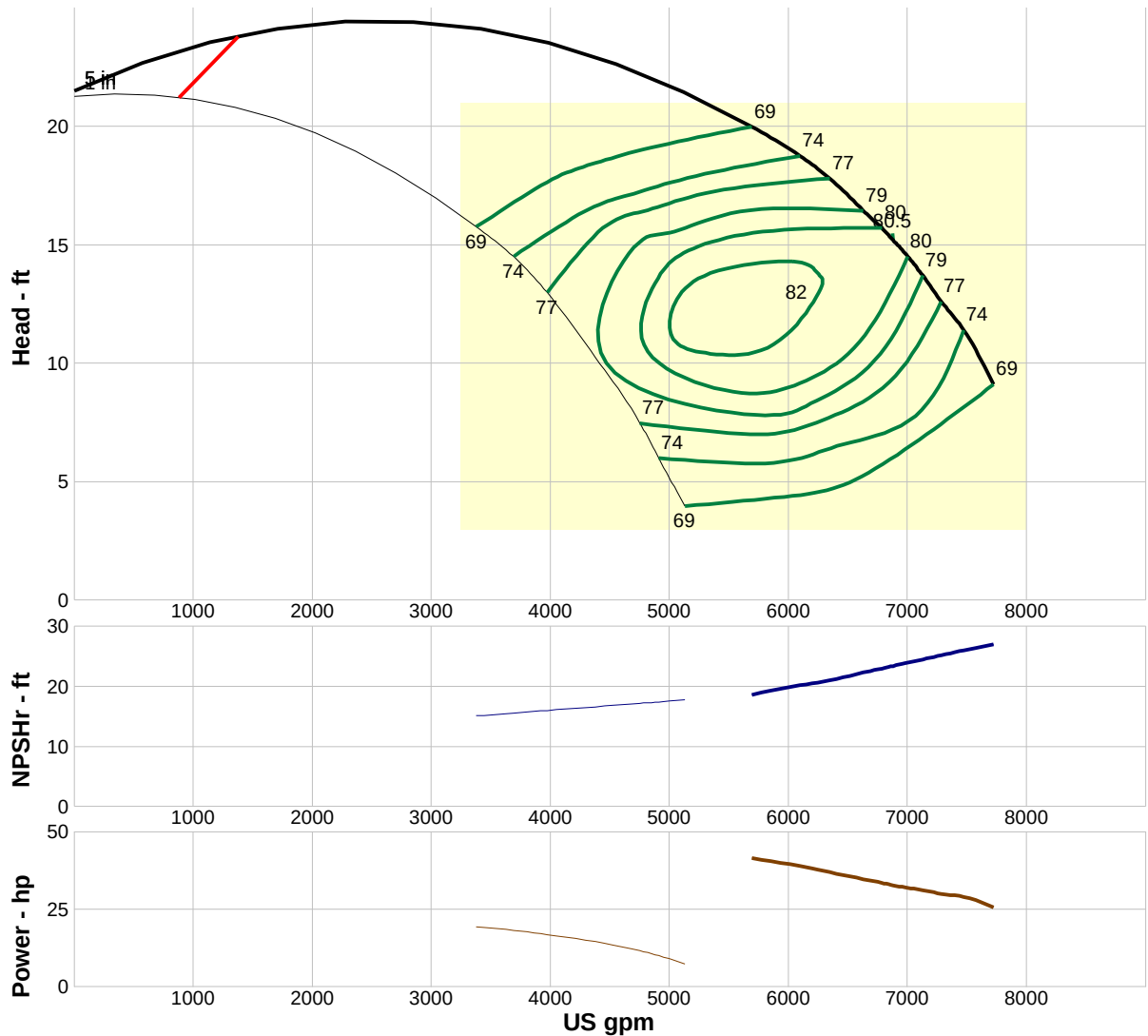
#### Fluid:

Water  
 Density: 62.25 lb/ft<sup>3</sup>  
 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: ---

| ---- Data Point ----   |                       |
|------------------------|-----------------------|
| Flow:                  | 6875 US gpm           |
| Head:                  | 15.2 ft               |
| Eff:                   | 80.5%                 |
| Power:                 | 32.8 hp               |
| NPSHr:                 | 23.4 ft               |
| ---- Design Curve ---- |                       |
| Shutoff head:          | 21.5 ft               |
| Shutoff dP:            | 9.29 psi              |
| Min flow:              | 1375 US gpm           |
| BEP:                   | 80.5% @ 6875 US gpm   |
| NOL power:             | 69.2 hp @ 1375 US gpm |
| -- Max Curve --        |                       |
| Max power:             | 69.2 hp @ 1375 US gpm |



#### Performance Evaluation:

| Flow<br>US gpm | Speed<br>rpm | Head<br>ft | Efficiency<br>% | Power<br>hp | NPSHr<br>ft |
|----------------|--------------|------------|-----------------|-------------|-------------|
| 7410           | 1160         | 11.8       | 74.9            | 29.4        | 25.7        |
| 6175           | 1160         | 18.4       | 75              | 38.4        | 20.5        |
| 4940           | 1160         | 20.2       | 59.8            | 46.4        | 15.7        |
| 3705           | 1160         | 20.5       | 44.6            | 54.3        | 10.8        |
| 2470           | 1160         | 20.8       | 29.4            | 62.2        | 5.93        |