

Company: Bonneville Power Administration

Name:

Date: 11/26/2006



#### Pump:

Size: 6"2821A  
 Type: 2800-HSC  
 Synch speed: 1200 rpm  
 Curve: 210606A  
 Specific Speeds:  
 Dimensions:  
 Speed: 1170 rpm  
 Dia: 9.44 in  
 Impeller: J6C1A1  
 Ns: 3224  
 Nss: 7552  
 Suction: 8 in  
 Discharge: 6 in

#### Pump Limits:

Temperature: 160 °F  
 Pressure: 300 psi g  
 Sphere size: 0.88 in  
 Power: --- hp  
 Eye area: --- in<sup>2</sup>

#### Search Criteria:

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

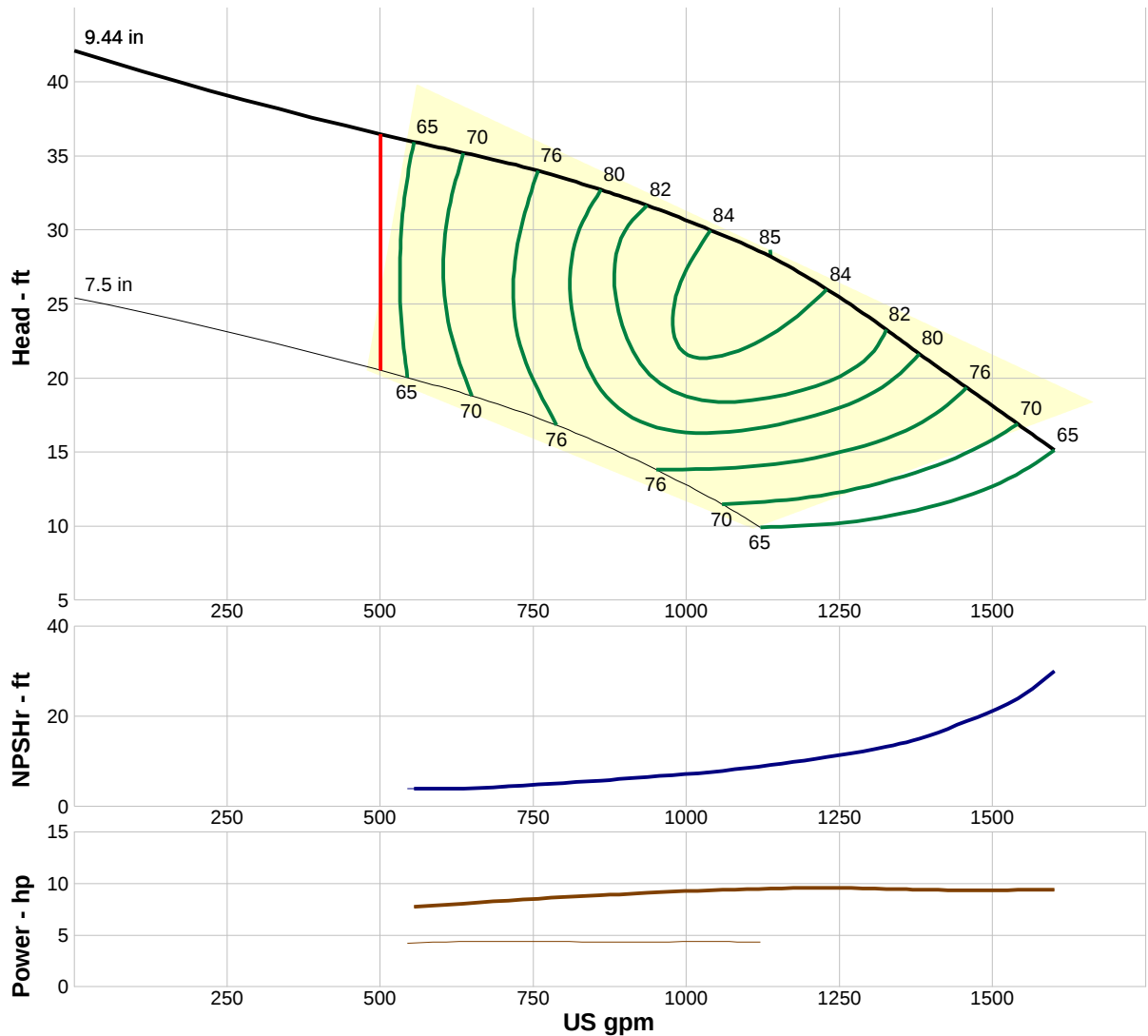
#### Fluid:

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  
 Size: 10 hp  
 Speed: 1200  
 Frame: 256T

| ---- Data Point ----   |                      |
|------------------------|----------------------|
| Flow:                  | 1137 US gpm          |
| Head:                  | 28.2 ft              |
| Eff:                   | 85%                  |
| Power:                 | 9.52 hp              |
| NPSHr:                 | 9.25 ft              |
| ---- Design Curve ---- |                      |
| Shutoff head:          | 42.1 ft              |
| Shutoff dP:            | 18.2 psi             |
| Min flow:              | 500 US gpm           |
| BEP:                   | 85% @ 1137 US gpm    |
| NOL power:             | 9.6 hp @ 1229 US gpm |
| -- Max Curve --        |                      |
| Max power:             | 9.6 hp @ 1229 US gpm |



#### Performance Evaluation:

| Flow<br>US gpm | Speed<br>rpm | Head<br>ft | Efficiency<br>% | Power<br>hp | NPSHr<br>ft |
|----------------|--------------|------------|-----------------|-------------|-------------|
| 1536           | 1170         | 17         | 70              | 9.39        | 23.7        |
| 1280           | 1170         | 24.6       | 83              | 9.55        | 12.2        |
| 1024           | 1170         | 30.2       | 84              | 9.33        | 7.53        |
| 768            | 1170         | 33.9       | 76              | 8.59        | 4.98        |
| 512            | 1170         | 36.4       | 62              | 7.57        | 4           |