

Company: Bonneville Power Administration

Name:

Date: 2/9/2007

Selection: Gould Centrifugal Pump



#### Pump:

Size: 5SH  
Type: CC\_ENDSUCTION  
Synch speed: 3600 rpm  
Curve: GP SSH/SSH-F  
Specific Speeds:  
Dimensions:  
Speed: 3500 rpm  
Dia: 6.875 in  
Impeller:  
Ns: ---  
Nss: ---  
Suction: 2.5 in  
Discharge: 2 in

#### 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:

Consult GOULDS to select a motor for this pump.

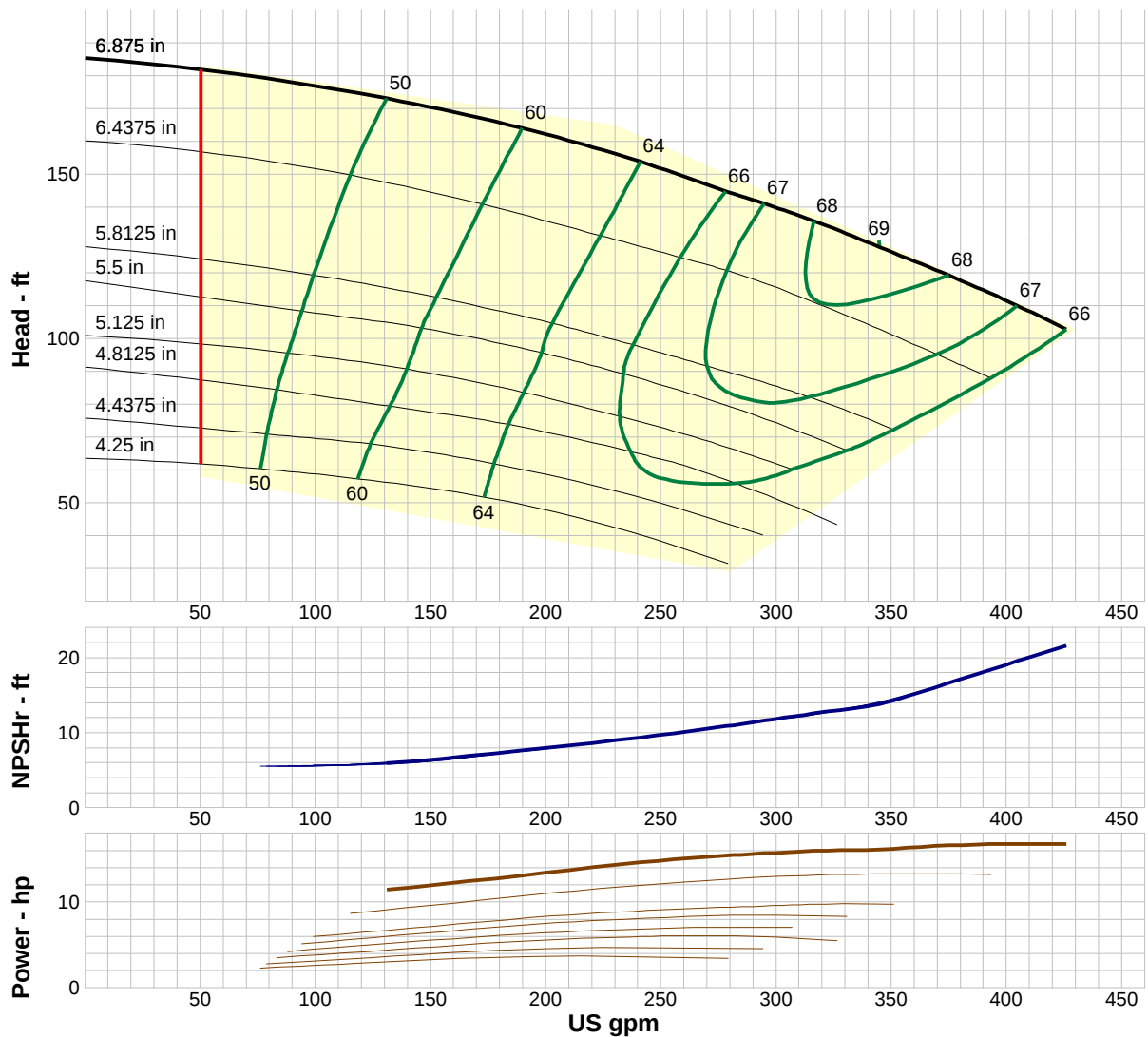
#### Pump Selection Warnings:

Design curve maximum power exceeds limit for the pump.

#### Pump Limits:

Temperature: 212 °F  
Pressure: 230 psi g  
Sphere size: 0.1562 in  
Power: 15 hp  
Eye area: --- in<sup>2</sup>

| ---- Data Point ----   |                      |
|------------------------|----------------------|
| Flow:                  | 345 US gpm           |
| Head:                  | 128 ft               |
| Eff:                   | 69%                  |
| Power:                 | 16.1 hp              |
| NPSHr:                 | 13.9 ft              |
| ---- Design Curve ---- |                      |
| Shutoff head:          | 185 ft               |
| Shutoff dP:            | 80.1 psi             |
| Min flow:              | 50 US gpm            |
| BEP:                   | 69% @ 345 US gpm     |
| NOL power:             | 16.8 hp @ 405 US gpm |
| -- Max Curve --        |                      |
| Max power:             | 16.8 hp @ 405 US gpm |



#### Performance Evaluation:

| Flow<br>US gpm | Speed<br>rpm | Head<br>ft | Efficiency<br>% | Power<br>hp | NPSHr<br>ft |
|----------------|--------------|------------|-----------------|-------------|-------------|
| 409            | 3500         | 108        | 67              | 16.8        | 20          |
| 341            | 3500         | 129        | 69              | 16.1        | 13.7        |
| 273            | 3500         | 146        | 66              | 15.3        | 10.7        |
| 205            | 3500         | 161        | 61              | 13.5        | 8.16        |
| 136            | 3500         | 172        | 51              | 11.6        | 6.07        |