

Company: Bonneville Power Administration

Name:

Date: 2/9/2007

Selection: Gould Centrifugal Pump



#### Pump:

Size: 1BF  
Type: CC\_ENDSUCTION  
Synch speed: 3600 rpm  
Curve: GP 3642/3742  
Specific Speeds:  
Dimensions:  
Speed: 3500 rpm  
Dia: 5.375 in  
Impeller:  
Ns: ---  
Nss: ---  
Suction: 1.25 in  
Discharge: 1 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.

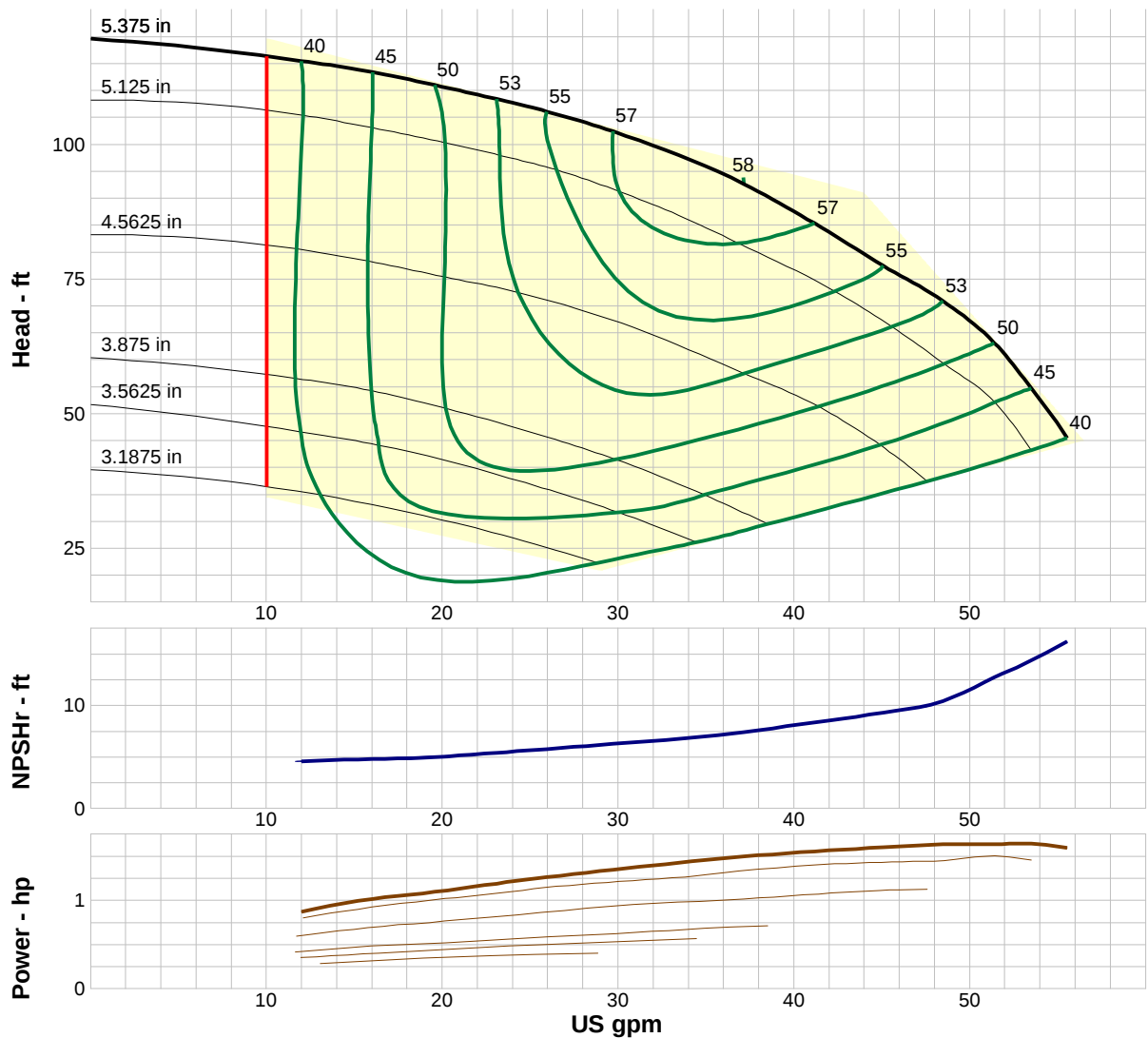
#### Pump Selection Warnings:

Design curve maximum power exceeds limit for the pump.

#### Pump Limits:

Temperature: 212 °F  
Pressure: 125 psi g  
Sphere size: 0.125 in  
Power: 1.5 hp  
Eye area: --- in<sup>2</sup>

| ---- Data Point ----   |                       |
|------------------------|-----------------------|
| Flow:                  | 37.1 US gpm           |
| Head:                  | 92.7 ft               |
| Eff:                   | 58%                   |
| Power:                 | 1.5 hp                |
| NPSHr:                 | 7.41 ft               |
| ---- Design Curve ---- |                       |
| Shutoff head:          | 120 ft                |
| Shutoff dP:            | 51.7 psi              |
| Min flow:              | 10 US gpm             |
| BEP:                   | 58% @ 37.1 US gpm     |
| NOL power:             | 1.64 hp @ 53.5 US gpm |
| -- Max Curve --        |                       |
| Max power:             | 1.64 hp @ 53.5 US gpm |



#### Performance Evaluation:

| Flow<br>US gpm | Speed<br>rpm | Head<br>ft | Efficiency<br>% | Power<br>hp | NPSHr<br>ft |
|----------------|--------------|------------|-----------------|-------------|-------------|
| 53.3           | 3500         | 55.4       | 45              | 1.64        | 14.2        |
| 44.4           | 3500         | 78.8       | 55              | 1.59        | 9.16        |
| 35.5           | 3500         | 94.8       | 58              | 1.46        | 7.17        |
| 26.6           | 3500         | 105        | 55              | 1.28        | 5.87        |
| 17.8           | 3500         | 112        | 48              | 1.06        | 4.9         |