Marlow Series 580
In-Line Mounted Centrifugal Pump

Performance curves for Marlow Series 580 In-Line Mounted Centrifugal Pump.
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**USEFUL PUMP FORMULAS**

Pressure (PSI) = \( \frac{\text{Head (Feet)} \times \text{Specific Gravity}}{2.31} \)  
Head (Feet) = \( \frac{\text{Pressure (PSI)} \times 2.31}{\text{Specific Gravity}} \)  
Vacuum (Inches of Mercury) = \( \frac{\text{Dynamic Suction Lift (Feet)} \times 0.883}{\text{Specific Gravity}} \)  
Horsepower (Brake) = \( \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960 \times \text{Pump Efficiency}} \)  
Horsepower (Water) = \( \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960} \)  
Efficiency (Pump) = \( \frac{\text{Horsepower (Water)}}{\text{Horsepower (Brake)}} \times 100 \text{ Per Cent} \)  
NPSH (Available) = Positive Factors – Negative Factors

**Affinity Laws: Effect of change of speed or impeller diameter on centrifugal pumps.**

<table>
<thead>
<tr>
<th>Impeller Diameter Change</th>
<th>Q₂ = ( \frac{D₂}{D₁} ) ( \frac{Q₁}{Q₁} )</th>
<th>H₂ = ( \left( \frac{D₂}{D₁} \right)^2 ) ( H₁ )</th>
<th>P₂ = ( \left( \frac{D₂}{D₁} \right)^3 ) ( P₁ )</th>
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<tr>
<th>Speed Change</th>
<th>Q₂ = ( \frac{\text{RPM}_₂}{\text{RPM}_₁} ) ( Q₁ )</th>
<th>H₂ = ( \left( \frac{\text{RPM}_₂}{\text{RPM}_₁} \right)^3 ) ( H₁ )</th>
<th>P₂ = ( \left( \frac{\text{RPM}_₂}{\text{RPM}_₁} \right)^3 ) ( P₁ )</th>
</tr>
</thead>
</table>

Where Q = GPM, H = Head, P = BHP, D = Impeller Dia., RPM = Pump Speed
HOW TO USE THIS BOOKLET

• Determine the Pump Model number from the quick selection charts on the cover of this Booklet. Required data: Pump Flow and Head and desired RPM. Use the Standard Pumps shown on this page when possible.

• Consult the individual pump curve for the desired pump model to determine the required motor horsepower, pump efficiency and NPSHR.

• For faster, computerized pump selections, consult your Marlow Representative about Marlow online Equipment Selection Program.
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1750 RPM PUMP CURVES

CENTRIFUGAL PUMP MARLOW SERIES 580

2x2x9\( \frac{1}{2} \)B
1750 R.P.M.

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