Marlow Series e-580
IN-LINE MOUNTED CENTRIFUGAL PUMP PERFORMANCE CURVES - 60 HZ
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7" - Size Curves ............................................................... 26-29  
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## USEFUL PUMP FORMULAS

\[
\text{Pressure (PSI)} = \frac{\text{Head (Feet)} \times \text{Specific Gravity}}{2.31} 
\]

\[
\text{Head (Feet)} = \frac{\text{Pressure (PSI)} \times 2.31}{\text{Specific Gravity}} 
\]

\[
\text{Vacuum (Inches of Mercury)} = \frac{\text{Dynamic Suction Lift (Feet)} \times 0.883}{\text{Specific Gravity}} 
\]

\[
\text{Horsepower (Brake)} = \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960 \times \text{Pump Efficiency}} 
\]

\[
\text{Horsepower (Water)} = \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960} 
\]

\[
\text{Efficiency (Pump)} = \frac{\text{Horsepower (Water)}}{\text{Horsepower (Brake)}} \times 100 \text{ Per Cent} 
\]

\[
\text{NPSH (Available)} = \text{Positive Factors} - \text{Negative Factors} 
\]

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

<table>
<thead>
<tr>
<th>GPM Capacity</th>
<th>Ft. Head</th>
<th>BHP</th>
</tr>
</thead>
<tbody>
<tr>
<td>( Q_2 ) = ( \frac{D_2}{D_1} \times Q_1 )</td>
<td>( H_2 = \left( \frac{D_2}{D_1} \right)^{2} H_1 )</td>
<td>( P_2 = \left( \frac{D_2}{D_1} \right)^{3} P_1 )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speed Change</th>
<th>GPM Capacity</th>
<th>Ft. Head</th>
<th>BHP</th>
</tr>
</thead>
<tbody>
<tr>
<td>( Q_2 = \frac{\text{RPM}_2}{\text{RPM}_1} \times Q_1 )</td>
<td>( H_2 = \left( \frac{\text{RPM}_2}{\text{RPM}_1} \right)^{2} H_1 )</td>
<td>( P_2 = \left( \frac{\text{RPM}_2}{\text{RPM}_1} \right)^{3} P_1 )</td>
<td></td>
</tr>
</tbody>
</table>

Where \( Q = \text{GPM} \), \( H = \text{Head} \), \( P = \text{BHP} \), \( D = \text{Impeller Dia.} \), \( \text{RPM} = \text{Pump Speed} \).
Series e-580

1800 RPM PUMP CURVES

*6" and below requires oversized diameter and angle trim. See manual.
Series e-580

1800 RPM PUMP CURVES

Series e-580

8x8x11B
1750 RPM

Series e-580

4x4x13.5
1750 RPM
*6" and below requires oversized diameter and angle trim. See manual.
Series e-580

2x2x9.5C
1150 RPM

TOTAL HEAD (ft) (m)

CAPACITY (GPM) (m³/h)

Series e-580

2.5x2.5x9.5C
1170 RPM

TOTAL HEAD (ft) (m)

CAPACITY (GPM) (m³/h)
Series e-580

1200 RPM PUMP CURVES

Series e-580

5x5x13.5
1180 RPM

Data: 7/21/2015
"6" and below requires oversized diameter and angle trim. See manual.
Xylem |ˈzɪləm|

1) The tissue in plants that brings water upward from the roots;  
2) a leading global water technology company.

We're a global team unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

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