G&L Pumps

Series A-C 8100 50 Hz

HORIZONTAL SPLIT CASE BASE MOUNTED - DOUBLE SUCTION PUMP
PERFORMANCE CURVES
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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 (in. of mercury) = \text{Dynamic Suction Lift (feet)} \times 0.883 \times \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) = \text{Positive Factors - Negative Factors}

AFFINITY LAWS: Effect of change of speed or impeller diameter on centrifugal pumps

<table>
<thead>
<tr>
<th>GPM Capacity</th>
<th>Feet Head</th>
<th>BHP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impeller Diameter Change</td>
<td>( Q_2 = \frac{D_2}{D_1} \times Q_1 )</td>
<td>( H_2 = \left( \frac{D_2}{D_1} \right)^2 \times H_1 )</td>
</tr>
<tr>
<td>Speed Change</td>
<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 \times H_1 )</td>
</tr>
</tbody>
</table>

Where \( Q = \text{GPM}, H = \text{Head}, P = \text{BHP}, D = \text{Impeller Diameter}, \text{RPM} = \text{Pump Speed} \)
50 HZ FULL HYDRAULIC RANGE CURVES

1480 RPM

2960 RPM
2900 RPM – 50 HZ PUMP CURVES
2900 RPM – 50 HZ PUMP CURVES

G&L Pumps

PUMP 6x4x10M    A-C 8100 Series

PUMP 8x6x12M    A-C 8100 Series

NOTE: 4140 Shaft material is standard on this pump at this speed.

Minimum recommended flow is 40% B.E.P.

Minimum recommended flow is 50% B.E.P.
1450 RPM – 50 Hz PUMP CURVES

**G&L Pumps**

**PUMP** 3x2x11S A-C 8100 Series

**SPEED:** 1450 RPM

**TOTAL HEAD**

<table>
<thead>
<tr>
<th>G&amp;L Pumps</th>
<th>PUMP 3x2x11S A-C 8100 Series</th>
<th>SPEED</th>
<th>1450 RPM</th>
<th>IMPELLER DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>P-3265</td>
<td>NO OF</td>
<td>VAINES</td>
<td>6</td>
</tr>
<tr>
<td>MAX</td>
<td>279mm</td>
<td>DIA</td>
<td>140mm</td>
<td></td>
</tr>
<tr>
<td>MIN</td>
<td>139mm</td>
<td>SPHERE</td>
<td>6.35mm</td>
<td></td>
</tr>
<tr>
<td>INLET</td>
<td>AREA</td>
<td>49.7cm²</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum recommended flow is 40% B.E.P.

**TOTAL HEAD**

<table>
<thead>
<tr>
<th>G&amp;L Pumps</th>
<th>PUMP 3x2x11L A-C 8100 Series</th>
<th>SPEED</th>
<th>1450 RPM</th>
<th>IMPELLER DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>P-3280</td>
<td>NO OF</td>
<td>VAINES</td>
<td>6</td>
</tr>
<tr>
<td>MAX</td>
<td>279mm</td>
<td>DIA</td>
<td>140mm</td>
<td></td>
</tr>
<tr>
<td>MIN</td>
<td>139mm</td>
<td>SPHERE</td>
<td>9.65mm</td>
<td></td>
</tr>
<tr>
<td>INLET</td>
<td>AREA</td>
<td>61.9cm²</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Minimum recommended flow is 40% B.E.P.
1450 RPM – 50 HZ PUMP CURVES

CENTRIFUGAL PUMP SERIES A-C 8100

PERFORMANCE CHARACTERISTIC CHART

TOTAL HEAD, FEET

TOTAL HEAD, METERS

CAPACITY, CUBIC METERS/HR

CAPACITY, U.S. GALLONS PER MINUTE

NPSH, METERS

NPSH, FEET

6x4x10A
1450 R.P.M.

Diameter to cutwater

N.P.S.H. REQUIRED

G&L Pumps

PUMP 6x4x10M  A-C 8100 Series

SPEED 1460 RPM

INPELLER DATA

Impeller P-3766-1

No. of Vanes 6

Max. DIA 305mm

Min. DIA 165mm

Max. Sphere 12.70mm

Inlet Area 103cm²

NPSH Req'D (METERS)

Suction Lift (METERS)

Minimum recommended flow is 40% B.E.P.
1450 RPM – 50 Hz PUMP CURVES

PERFORMANCE CHARACTERISTIC CHART
CENTRIFUGAL PUMP SERIES A-C 8100

G&L Pumps

1470 RPM

IMPELLER DATA

Minimum recommended flow is 49% B.E.P.
SERIES A-C 8100 - 50 Hz

1450 RPM – 50 HZ PUMP CURVES

G&L Pumps
PUMP 8x6x12L A-C 8100 Series

TOTAL HEAD
(Ft) (M)

325mm A
302mm B
263mm C
241mm D
213mm E
177mm F

IMP NO.
P-2969-1

MAX
325mm

MIN
178mm

SPEED
1480 RPM

IMPELLER DATA
NO. OF VANES 7
MAX DIAMETER
25.40mm
INLET AREA
251cm²

4.7 NPSH REQ'D (METERS)
5.4 SUCTION LIFT (METERS)

Minimum recommended flow is 40% D.E.P.

G&L Pumps
PUMP 8x6x12XL A-C 8100 Series

TOTAL HEAD
(Ft) (M)

340mm A
318mm B
304mm C
272mm D
248mm E
225mm F
203mm G

IMP NO.
P-4220

MAX
340mm

MIN
203mm

MAX DIAMETER
25.40mm
INLET AREA
282cm²

NPSH REQ'D (METERS)
Suction Lift (METERS)
3.0
7.1
4.0
6.1
4.1
6.0
4.1
1.1

Minimum recommended flow is 40% D.E.P.
1450 RPM – 50 Hz PUMP CURVES

G&L Pumps

**PUMP 8x6x13** A-C 8100 Series

- IMP: NO. 08-1668-1
- NO. OF VANES 7
- MAX DIA 333mm
- MIN DIA 178mm
- MAX INLET SPHERE 25.40mm
- MIN INLET AREA 286cm²

Minimum recommended flow is 40% B.E.P.

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G&L Pumps

**PUMP 8x6x17M** A-C 8100 Series

- IMP: NO. P-3248
- NO. OF VANES 6
- MAX DIA 432mm
- MIN DIA 254mm
- MAX INLET SPHERE 11.94mm
- MIN INLET AREA 190cm²

Minimum recommended flow is 40% B.E.P.
1450 RPM – 50 Hz PUMP CURVES

G&L Pumps

G&L Pumps

SERIES A-C 8100 - 50 Hz

Minimum recommended flow is 40% B.E.P.
1450 RPM – 50 Hz PUMP CURVES

For PUMP 8x8x17 A-C 8100 Series:
- Head: 449mm, 200mm, 150mm, 100mm, 50mm, 0mm
- NPSH: 3.7m, 4.2m, 5.4m, 5.9m, 4.2m
- kW: 75, 50, 25, 0
- Flow: 0 to 550 GPM

For PUMP 10x8x12S A-C 8100 Series:
- Head: 325mm, 150mm, 100mm, 50mm, 0mm
- NPSH: 2.3m, 4.7m, 7.0m, 5.4m, 3.1m
- kW: 75, 50, 25, 0
- Flow: 0 to 550 GPM

Minimum recommended flow is 40% B.E.P.
1450 RPM – 50 Hz Pump Curves

G&L Pumps

PUMP 10x8x12L A-C 8100 Series

G&L Pumps

PUMP 10x8x17S A-C 8100 Series

G&L Pumps

Series A-C 8100 - 50 Hz

G&L Pumps
1450 RPM – 50 Hz PUMP CURVES

G&L Pumps

PUMP 10x8x17L A-C 8100 Series

TOTAL HEAD

G&L Pumps

PUMP 10x8x20S A-C 8100 Series

TOTAL HEAD
1450 RPM – 50 Hz PUMP CURVES

G&L Pumps

Minimum recommended flow is 40% B.E.P.

Minimum recommended flow is 40% B.E.P.
1450 RPM – 50 Hz PUMP CURVES
1450 RPM – 50 HZ PUMP CURVES

G&L Pumps

PUMP 12x10x14  A-C 8100 Series

TOTAL HEAD

Ft (M)

G&L Pumps

PUMP 12x10x17  A-C 8100 Series

TOTAL HEAD

Ft (M)

Minimum recommended flow is 40% B.E.P.
Xylem |ˈzɪləm|

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

We’re 12,500 people 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.

For more information on how Xylem can help you, go to www.xyleminc.com