• LIQUID RING VACUUM PUMPS
• STOCK / PULP PUMPS
• TRI-DISC REFINER / DISC SETS
• WATER SEPERATOR PUMPS
**Material Selection Chart**


GXS - Rotor and Control Cones in 304 / 306 Stainless Steel Shaft in 410 SS

GCSC - Body - Cladded with 306 SS
   Head - Cladded with 316 SS

Optional - 305L, 410 SS, Ph. Bronze, Alloy - 20

**Testing Standards:**

Each pump is subject to rigorous test runs at our Solid Concrete Test Bed facilities in accordance with HEI Standards for LRVP’s (NASH ORIFICE METHOD) / BS 1571 PT - 2 PNEUROPE LTD. Authenticating the Power, Vacuum and Air Displacement Parameters, each pump is certified for its performance.

<table>
<thead>
<tr>
<th>Model</th>
<th>GXL - Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>GXL-9000</td>
<td></td>
</tr>
<tr>
<td>GXL-6000</td>
<td></td>
</tr>
<tr>
<td>GXL-4000</td>
<td></td>
</tr>
<tr>
<td>GXL-3000</td>
<td></td>
</tr>
<tr>
<td>GXL-2000</td>
<td></td>
</tr>
<tr>
<td>GXL-1000</td>
<td></td>
</tr>
<tr>
<td>GXL-700</td>
<td></td>
</tr>
<tr>
<td>GXL-400</td>
<td></td>
</tr>
</tbody>
</table>

**Volume in M³/Hr**

---

**Dimensions Table**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>Dim in mm</th>
<th>FLANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>GXL - 400</td>
<td>902</td>
<td>448</td>
</tr>
<tr>
<td>GXL - 700</td>
<td>1026</td>
<td>571</td>
</tr>
<tr>
<td>GXL - 1000</td>
<td>1216</td>
<td>679</td>
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<tr>
<td>GXL - 2000</td>
<td>1508</td>
<td>908</td>
</tr>
<tr>
<td>GXL - 3000</td>
<td>1727</td>
<td>1030</td>
</tr>
<tr>
<td>GXL - 4000</td>
<td>2050</td>
<td>1314</td>
</tr>
<tr>
<td>GXL - 6000</td>
<td>2413</td>
<td>1429</td>
</tr>
<tr>
<td>GXL - 9000</td>
<td>2413</td>
<td>1562</td>
</tr>
</tbody>
</table>

Note: All dimensions are in mm and subject to change without notice.
“909” SERIES POWER SAVING DESIGNS

LIQUID RING VACUUM PUMPS
Material Selection Chart

GX S - Rotor and Control Cones in 304 / 306 Stainless Steel Shaft in 410 SS
GCSC - Body - Cladded with 306 SS
          Head - Cladded with 316 SS
Optional - 306L, 410 SS, Ph. Bronze, Alloy - 20

Testing Standards:
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Special Features
- Power Efficient: Highest CFM per BHP Ratio
- Higher Displacement - More Suction Volume: 20 Vane rotors handle more air than conventional 16 Vane rotors
- Provision for spray nozzles at suction flanges
- Removable bearing Brackets - Easy and quick maintenance
- Two independent vacuum operations

<table>
<thead>
<tr>
<th>Model</th>
<th>Dim in mm</th>
<th>FLANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>G - 9</td>
<td>2015</td>
<td>1055</td>
</tr>
<tr>
<td>909 L</td>
<td>2188</td>
<td>1245</td>
</tr>
<tr>
<td>909 M</td>
<td>2391</td>
<td>1245</td>
</tr>
<tr>
<td>909 P</td>
<td>2559</td>
<td>1480</td>
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<tr>
<td>909 R</td>
<td>2788</td>
<td>1480</td>
</tr>
<tr>
<td>909 S</td>
<td>2985</td>
<td>1765</td>
</tr>
<tr>
<td>909 T</td>
<td>3162</td>
<td>1765</td>
</tr>
</tbody>
</table>

Note: All dimensions are in mm and subject to change without notice
G - 12000 Series

A New Concept with Improved Efficiencies due to Changes in the Internal Designs than the Previous Highly Successful GXL, 909 & GSC Series have given the G- 12000 Series A Cutting Edge

SPECIAL FEATURES / ADVANTAGES:
G -12000 comes with Unique Suction / Inlet Configuration Allowing for Both Top & Side Inlet Arrangements so as to Accommodate Installations with Low Heights. Bottom & Side Discharge Connections offers Client Flexibility in the Commissioning.
G – 12000 Comes / Allows Efficient Operations over the Entire Vacuum Range with Needing to Change The Pump Internals like Cones etc. Large Inspection Ports / Window allows easy access to pump Internals for Maintenance Checks & Routine Inspections.

Capacity Range
Up to 13000 CFM

Material Selection Chart

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GXS</td>
<td>Rotor and Control Cones in 304 / 306 Stainless Steel Shaft in 410 SS</td>
</tr>
<tr>
<td>GCSC</td>
<td>Body - Cladded with 306 SS Head - Cladded with 316 SS</td>
</tr>
<tr>
<td>Optional</td>
<td>306L, 410 SS, Ph. Bronze, Alloy - 20</td>
</tr>
</tbody>
</table>

Testing Standards :
Each pump is subject to rigorous test runs at our Solid Concrete Test Bed facilities in accordance with HEI Standards for LRVP’s (NASH ORIFICE METHOD) / BS 1571 PT - 2 PNEUROPE LTD. Authenticating the Power, Vacuum and Air Displacement Parameters, each pump is certified for its performance.

Flange Details

<table>
<thead>
<tr>
<th></th>
<th>INLET</th>
<th>SIDE / BOTTOM OUTLET</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.R.</td>
<td>250</td>
<td>200</td>
</tr>
<tr>
<td>O.D.</td>
<td>406</td>
<td>343</td>
</tr>
<tr>
<td>P.C.D.</td>
<td>362</td>
<td>238</td>
</tr>
<tr>
<td>HOLE SIZE</td>
<td>Ø22 M20 Ø22 M20</td>
<td></td>
</tr>
<tr>
<td>HOLES</td>
<td>8</td>
<td>4 6 2</td>
</tr>
</tbody>
</table>

Note: All dimensions are in mm only, subject to change without notice
GARUDA “GS3” SERIES

GARUDA “GS3” Series Centrifugal / Pulp Pumps are highly reputed for Water Resistance, Low Clogging, Superior Efficiency, very Robust Designs and very precise manufacturing. Impellers are of investment casting / superior Duplex Steel.

Performance Curves (n = 1500 rpm)

GARUDA “GS3” Series have Applications in:

Environmental Industry
- Waster Water Treatment
- Industrial Sludge
- Flue gas Desulphurization
- Coal Pulp

Pulp & Paper Industry
- Mechanical Pulp
- Recycled Fibers
- White Water

Food Industry
- Raw Juice, Syrup
- Pickling Water, Lye

Wear Liners
Wear Liners in the suction and delivery side protect both the casing and casing cover.

Impeller
Fully open of semi-open design, 3 or 6 vanes, high hydraulic coverage, big passage, low clogging

Bearing Assembly
Sturdy heavy-duty bearings, oil or grease lubricated

Shaft
Amply sized shafts offers higher long time vibration-free running

- GS3 Capacity Range : 30 m³/hr - 600 m³/hr
- GS3 Head Range : 5 mtr - 60 mtr
- GS3 Consistency : upto 1% - 6%
- GS3 Power Range : 2.2 Kw - 110 Kw motor rating
GSC SERIES

LIQUID RING VACUUM PUMPS
**Material Selection Chart**

- **GXS** - Rotor and Control Cones in 304 / 306 Stainless Steel Shaft in 410 SS
- **GCSC** - Body - Cladded with 316 SS
  Head - Cladded with 316 SS
- **Optional** - 316L, 410 SS, Ph. Bronze, Alloy - 20

**Testing Standards**: Each pump is subject to rigorous test runs at our Solid Concrete Test Bed facilities in accordance with HEI Standards for LRVP's (NASH ORIFICE METHOD) / BS 1571 PT - 2 PNEUROPE LTD. Authenticated the Power, Vacuum and Air Displacement Parameters, each pump is certified for its performance.

**GSC Series**
**Single Cone Vacuum Pump**

- **Suction Capacity**: 220 to 5000m³/Hr
- **Power Consumption**: 7.5 kW to 132 kW
- **Maximum Vacuum**: 710 mm of Hg (G)

**Other Products**

- **GXL - Series**
- **909 - Series**
- **Tri-Disc Refiners**
- **GWV - Series**
- **Oil Seal Vacuum pumps**
Material Selection Chart

GXS - Rotor and Control Cones in 304 / 306 Stainless Steel Shaft in 410 SS
GCSC - Body - Cladded with 316 SS Head - Cladded with 316 SS
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GSC Series
Single Cone Vacuum Pump
Suction Capacity : 220 to 5000 m³/Hr
Power Consumption : 7.5 kW to 132 kW
Maximum Vacuum : 710 mm of Hg (G)

Other Products

GXL - Series
909 - Series
Tri-Disc Refiners
GWV - Series
Oil Seal Vacuum pumps
TECHNICAL SPECIFICATIONS / DATA SPLINE SHAFT DESIGNS

<table>
<thead>
<tr>
<th>REFINER SIZE</th>
<th>GDR-13</th>
<th>GDR-17</th>
<th>GDR-21</th>
<th>GDR-24</th>
<th>GDR-26</th>
<th>GDR-31</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAPACITY</td>
<td>TPD</td>
<td>10-15</td>
<td>15-45</td>
<td>25-80</td>
<td>40-120</td>
<td>80-140</td>
</tr>
<tr>
<td>CONSISTENCY</td>
<td>%</td>
<td>3.5-6.0</td>
<td>3.5-6.0</td>
<td>3.5-6.0</td>
<td>3.5-6.0</td>
<td>3.5-6.0</td>
</tr>
<tr>
<td>MOTOR RATING</td>
<td>HP</td>
<td>30-60</td>
<td>100-150</td>
<td>200-300</td>
<td>350-450</td>
<td>500-550</td>
</tr>
<tr>
<td>REFINER SPEED</td>
<td>RPM</td>
<td>960</td>
<td>960</td>
<td>960</td>
<td>720</td>
<td>720</td>
</tr>
<tr>
<td>STOCK INLET PRESSURE</td>
<td>Kg / Cm²</td>
<td>-</td>
<td>-</td>
<td>1-2</td>
<td>1-2</td>
<td>1-2</td>
</tr>
</tbody>
</table>

Note: GDR - 13 Available in Gear Coupling Designs Only.

No. | Particulars                        | Garuda TDR | Conventional DDR
--- | ----------------------------------- |------------|-----------------|
1.  | Bar Height                         | 12-14 mm*  | 6-7 mm          |
2.  | AVG bar height                     | 13 mm*     | 7 mm            |
3.  | Total No. of refining surface      | 4          | 4               |
4.  | Total bar height                   | 52 mm      | 28 mm           |
5.  | Min. wastage/size                  | 2.5 mm     | 2.5 mm          |
6.  | Total wastage                      | 10 mm      | 10 mm           |
7.  | Net usable BAL height              | 42 mm      | 18 mm           |

* Influence on, throughput / power / life

MATERIAL OF CONSTRUCTION

- **REFINER BODY**
  - SOLID SINGLE PIECE
- **STOCK INLET**
  - STAINLESS STEEL-304
- **CYLINDER**
  - CASTED
- **SHAFT HUB**
- **STUFFING BOX**
  - SHAFT - SAE 8620 (Hardened - Nitride Process + Carburised)
- **SHAFT**
- **REFINER DISCS**
  - CA-40

![5 X 5 Bar Pattern](image)

![Spline Shaft Auto Loading Designs](image)
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