GUZZLER® DIAPHRAGM PUMPS

VACUUM & TRANSFER PUMPS FOR THE MAPLE SYRUP INDUSTRY
**MOTORIZED GUZZLER PUMPS FOR VACUUM PRODUCTION**

Bosworth’s motorized Guzzler diaphragm pumps are used to establish vacuum on maple sap collection lines. Unlike expensive vacuum pumps that require a separator to isolate sap from the pump, Guzzler pumps can both establish the vacuum and transfer sap. Guzzler motorized pumps are available with 115VAC and 12VDC motors. They are rated at 22 in of Hg vacuum.

Bosworth’s single diaphragm pumps can be used on up to 400 taps. Bosworth’s recently introduced “double-diaphragm” pump can establish vacuum on up to 800 taps.

**GUZZLER HAND PUMPS FOR MAPLE SAP TRANSFER**

Bosworth’s Guzzler hand pumps can transfer sap through maple syrup presses. Guzzler pumps offered for this application are made of FDA-approved materials for all the components that come in contact with the sap. These pumps have a maximum service temperature of 220 degrees F (104 degrees C) and can generate pressures up to 15 psi (1.0 bar).

*For ease of operation, our hand pumps can be equipped with an optional extended handle.* This handle measures 19 in (48.3 cm) long, and is operated using our unique “guided-stroke” diaphragm action. This optional handle not only makes operation twice as easy (by doubling the mechanical advantage of the pump), but its guided-stroke action helps prolong diaphragm life.

Guzzler hand pumps’ ability to transfer highly viscous fluids allows them to effectively pump both maple sap and maple syrup.
**G2 GUZZLER DOUBLE DIAPHRAGM SAPPULLER PUMPS**

- Ideal for vacuum production on **up to 800 taps**
- Available with **115 VAC or 12 VDC** motor
- Transfers at 19.8 gpm (2.5 cfm)
- **No separator** required
  - *Creates vacuum and transfers fluid*
- Buna-N diaphragm and silicone umbrella valves made of **FDA-approved materials**
- **Reversible manifold** with 1-1/4 in Female inlet/outlet ports
- Ships with **two spare diaphragms**

![G2 GUZZLER DOUBLE DIAPHRAGM SAPPULLER PUMPS](image)

**G2-0501N**

Model # G2-0501N-071-58-7171-BP

**115 VAC Motor**
- 1/8 hp, 72 rpm
- Water resistant enclosure
- Full Load: 1.6 Amps
- Run-time Power Requirement: ~120 watts

**G2-0503N**

Model # G2-0503N-071-58-7171-BP

**12 VDC Motor**
- 1/6 hp, 64 rpm perm.magnet motor
- Totally enclosed, non-ventilated
- Full Load: 14.0 Amps
- 8-10 hours operation on two (2) 60-amp hour batteries
**REVERSIBLE MANIFOLDS IN G2 PUMPS**

- Pump manifolds can be easily detached and reconfigured.
- Pump bodies can be rotated to invert pump inlet and outlet.

Different manifold configurations for G2 Pump.

Different manifold configurations for G2 Pump, with pump inlet and outlet reversed.
Motorized Guzzler Vacuum Pumps

“GE” GUZZLER DIAPHRAGM PUMP

- Ideal for vacuum production on **up to 400 taps**
- Available with **115 VAC or 12 VDC** motor
- Transfers at 9.9 gpm (1.3 cfm)
- **No separator** required
  - *Creates vacuum and transfers fluid*
- Buna-N diaphragm and silicone umbrella valves made of **FDA-approved materials**
- Available with 1” Smooth, 3/4” F, 3/4” M, 1-1/4” F, 1-1/2” Smooth and 1-1/2” M ends
- Ships with **spare diaphragm**

**GE-0401N / GE-0501N**

**115 VAC Motor**
- 1/8 hp, 72 rpm
- Water resistant enclosure
- Full Load: 1.6 Amps
- Run-time Power: ~120 watts
- Available ends:
  - GE-0401N: 3/4”F, 3/4”M, 1” Smooth
  - GE-0501N: 1-1/4”F, 1-1/2” Smooth, 1-1/2” M

**GE-0403N / GE-0503N**

**12 VDC Motor**
- 1/6 hp, 64 rpm, perm. magnet motor
- Totally enclosed, non-ventilated
- Full Load: 14.0 Amps
- 8-10 hrs operation on two (2) 60-amp hour batteries
- Available ends:
  - GE-0403N: 3/4”F, 3/4”M, 1” Smooth
  - GE-0503N: 1-1/4”F, 1-1/2” Smooth, 1-1/2” M
## “GE” Guzzler Diaphragm Pumps: Popular Models

<table>
<thead>
<tr>
<th>Model #</th>
<th>Motor Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE-0503D-061-18-7171-PL</td>
<td>12 VDC, 64 rpm</td>
<td>Gray acetal plastic pump body &amp; flanges. Duckbill valves; 1-1/4” F (tapped) inlet/outlet.</td>
</tr>
</tbody>
</table>
GH-0400N AND GH-0500N HAND PUMPS

- Ideal for *use in small maple presses*
- Generates **15 psi**
- Transfers at **10 gpm** (0.44 Qt/ stroke)
- Use on fluids *up to 220 °F (104 °C)*
  - *Creates vacuum and transfers fluid*
- **FDA-approved materials** for all wetted components
- **Rugged aluminum handle**
- Optional aluminum clamp ring for added durability
- Available with range of end styles and sizes

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<table>
<thead>
<tr>
<th>Model #</th>
<th>GH-0400N-3</th>
<th>GH-0500N-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inlet/Outlet Ports (Standard)</td>
<td>1” Smooth</td>
<td>1-1/2” Smooth</td>
</tr>
<tr>
<td><strong>Also Available</strong></td>
<td>1/2”F, 3/4”F, 3/4”M</td>
<td>1-1/4” F, 1-1/2” M</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>Buna-N (FDA material)</td>
<td>Silicone</td>
</tr>
<tr>
<td><strong>Also Available</strong></td>
<td></td>
<td>Silicone</td>
</tr>
<tr>
<td>Valves (Standard)</td>
<td>Flappers—White Buna</td>
<td>Umbrella—Silicone</td>
</tr>
<tr>
<td><strong>Also Available</strong></td>
<td>Umbrella—Silicone</td>
<td></td>
</tr>
</tbody>
</table>
EXTENDED-HANDLE
GUZZLER PUMP FOR
MAPLE PRESSES

CUTS YOUR EFFORT IN HALF!

- Extended 19-inch aluminum handle provides *easier pumping*
- Unique “Guided-stroke” pumping action *prolongs diaphragm life*
- Use on fluids *up to 220 °F (104 °C)*
- *FDA-approved materials* for all wetted components
- Available with range of end styles and sizes

<table>
<thead>
<tr>
<th>Model #</th>
<th>GH-0400N-5</th>
<th>GH-0500N-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handle</td>
<td>19-inch</td>
<td></td>
</tr>
<tr>
<td>Inlet/Outlet Ports (Standard)</td>
<td>1” Smooth</td>
<td>1-1/2” Smooth</td>
</tr>
<tr>
<td>Also Available</td>
<td>1/2”F, 3/4”F, 3/4”M</td>
<td>1-1/4” F, 1-1/2” M</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>Buna-N (FDA material)</td>
<td></td>
</tr>
<tr>
<td>Also Available</td>
<td>Silicone</td>
<td></td>
</tr>
<tr>
<td>Valves (Standard)</td>
<td>Flappers—White Buna</td>
<td>Umbrella—Silicone</td>
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<tr>
<td>Also Available</td>
<td>Umbrella—Silicone</td>
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EXTENDED HANDLE CONVERSION KIT

*Everything you need to convert your standard-length pump handle to the 19-inch extended handle.*

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<th>Model #</th>
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<tbody>
<tr>
<td>GDIA.ASS.LNGHNDL.KIT</td>
<td>Pump handle conversion kit. Contains 19-inch aluminum handle, guided stroke clamp ring, handle actuator extension, stainless steel side plates and fasteners.</td>
</tr>
</tbody>
</table>
EXTENDED HANDLE PUMP WITH “GUIDED-STROKE” PUMPING ACTION

Handle-actuated piston travels within a self-lubricating bearing, ensuring only vertical forces are applied to generate diaphragm up-and-down motion.

Guided-stroke pump action ensures completely level diaphragm travel.
Guzzler Pump Maintenance

Replace pump diaphragms and valves as needed.

Remove screws to remove body

Remove screw attaching diaphragm

Diaphragm removal for GE Motorized Pump

Valves are installed between pump inlet/outlet ports and pump body.

Duckbill valves point in direction of fluid flow

Umbrella valve stem points opposite to direction of fluid flow

When to use which valves?

Umbrella valves are best for vacuum service. Use duckbills if transferring dirty fluid (i.e., fluid with particles in suspension that could foul umbrella valve openings.)

GE-0401x Duckbill valve (left: Closed; right: Open)

GE-0501x umbrella valve (left: Closed; right: Open)
Pump **Service Kits** help keep your Guzzler running

*Includes replacement diaphragm and valves*

<table>
<thead>
<tr>
<th>Model #</th>
<th>Description</th>
<th>Compatible with</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK-N4N0X-61</td>
<td>Service Kit for ‘400 Series pumps. Contains Buna-N diaphragm and two duckbill valves.</td>
<td>GE-0401D, GE-0403D</td>
</tr>
<tr>
<td>SK-N500X-61</td>
<td>Service Kit for ‘500 Series “N” pumps. Contains Buna-N diaphragm and two duckbill valves</td>
<td>GE-0501D, GE-0503D</td>
</tr>
</tbody>
</table>
Maple Sap Pumps

Guzzler Pumps for Maple Sap Collection and Processing

Bosworth's Guzzler diaphragm pumps are widely used to establish vacuum on maple sap collection lines. Unlike expensive vacuum pumps that require a separator to isolate sap from the pump, Guzzler diaphragm pumps can both establish the vacuum and transfer the sap through the pump. Guzzler vacuum pumps are available with 115VAC and 12VDC motors. The Guzzler pumps are rated at 22 in. of Hg vacuum. They are available in standard gray Acetal plastic, as well as in the white (pigment-free) Natural Delrin. The wetted components of these pumps are made of FDA-approved materials for any component that comes in contact with the sap.

Additionally, Guzzler hand pumps are used to transfer syrup through maple syrup presses. Both the GH-0400N and the recently introduced GH-0500N pumps are made of FDA-approved materials for all components in contact with the syrup.

Motorized Pumps

- **G2-0501N-0**
  - 115 VAC Double Diaphragm pump. Accommodates up to 800 taps. Use with 1-1/4" hose/tubing.

- **GE-0401D-0**
  - 115 VAC Guzzler Motorized Pump. 3/4" to 1-1/4" hose sizes.

- **GE-0401N-0**
  - 115 VAC Motor. FDA-approved materials for all wetted components. 3/4" to 1-1/4" hose sizes.

- **GE-0501D-0**
  - 115 VAC Motorized Guzzler 500 Pump. 1-1/4" to 2" hose sizes.

- **GE-0501N-0**
  - 115 VAC motor. FDA-approved materials for all wetted components. Use with 1-1/4" to 2" hose sizes.

- **GE-0403D-0**
  - 12 VDC Motorized Guzzler Pump. Use with 3/4" to 1-1/4" hose sizes.

- **GE-0403N-0**
  - 12 VDC motor. FDA-approved materials for wetted components. Use with 3/4" to 1-1/4" size hoses.

- **GE-0503D-0**
  - 12 VDC Motorized Guzzler 500 Pump. Use with 1-1/4" to 2" size hoses.