## AUTOMATIC AIR RELEASE VALVES

**GRP33-07 Models**

### AUTOMATIC AIR RELEASE VALVES
Gorman-Rupp Automatic Air Release Valves are designed to release air from a self-priming pump during the priming cycle. After the pump primes and begins to deliver liquid, the valve closes to restrict by-pass flow. When the pump stops, the valve automatically opens and is ready for the next priming cycle.

### Materials of Construction

<table>
<thead>
<tr>
<th>Valve P/N</th>
<th>Valve Body</th>
<th>Elastomers</th>
<th>Plunger Rod</th>
<th>Insp. Cover</th>
<th>Internal Hdwr</th>
<th>External Hdwr</th>
<th>Spring Color/Compression</th>
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<tbody>
<tr>
<td>GRP33-07</td>
<td>C.I. 30</td>
<td>Buna-N</td>
<td>SST 304</td>
<td>C.I. 30</td>
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<td>*Fluoro</td>
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<td>Red</td>
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* DuPont Viton® or Equivalent.
** 3M Corporation Aflas® or Equivalent.
*** Consult Factory for Material/Discharge Head Combinations Not Listed.

Optional: Spring Removal Tool P/N 48781-003

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**THE GORMAN-RUPP COMPANY ● MANSFIELD, OHIO**

GORMAN-RUPP OF CANADA LIMITED ● ST. THOMAS, ONTARIO, CANADA

www grpumps.com

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**THEORY OF OPERATION**

Air from the pump casing passes through the valve the wet well or sump during the priming cycle (Figure 1).

When the pump is fully primed, pressure resulting from flow against the valve diaphragm compresses the spring and closes the valve. The valve will remain closed, reducing the by-pass of liquid to 1 to 5 gallons per minute until completion of the pumping cycle (Figure 2).

When the pump shuts down, the spring returns the diaphragm to its original position. Any solids that may have accumulated in the diaphragm chamber settle to the bottom and are flushed out during the next pumping cycle (Figure 3).

**NOTE:** Always provide a dedicated bleed line of at least 1" diameter for each valve. Do not manifold bleed lines in a multiple pump installation.

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**TYPICAL INSTALLATION**

- Discharge Pipe
- Clean-Out Cover
- Support Bracket
- Wet Well or Sump
- Suction Line
- Install Air Release Valve in Horizontal Position
- 90° Long Discharge Elbow