

CDS



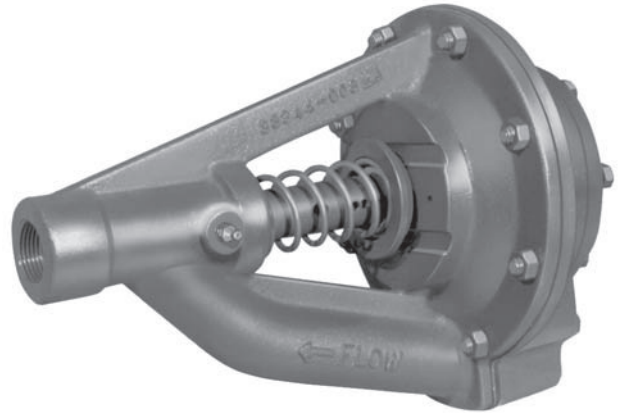
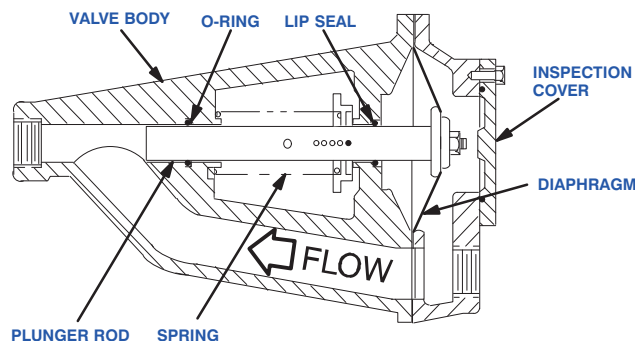
# AUTOMATIC AIR RELEASE VALVES

## GRP33-07 Models

### Size 1" x 1" NPT

#### 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.



| ***<br>Valve<br>P/N | Static Discharge<br>Head<br>Ft.<br>(Meters) |                     |                    | Materials of Construction |                 |                |                |                  |                  | Spring Color/<br>Compression |                      |                      |
|---------------------|---------------------------------------------|---------------------|--------------------|---------------------------|-----------------|----------------|----------------|------------------|------------------|------------------------------|----------------------|----------------------|
|                     | 4-17<br>(1,2-5,2)                           | 18-49<br>(5,4-14,9) | 50 Up<br>(15,2 Up) | Valve<br>Body             | Elasto-<br>mers | Plunger<br>Rod | Insp.<br>Cover | Internal<br>Hdwr | External<br>Hdwr | 10 lbs.<br>(4,5 kg)          | 25 lbs.<br>(11,3 kg) | 80 lbs.<br>(36,2 kg) |
| GRP33-07            |                                             | X                   |                    | C.I. 30                   | Buna-N          | SST 304        | C.I. 30        | SST 304          | Plated Stl.      |                              | Plain                |                      |
| GRP33-07A           | X                                           |                     |                    | C.I. 30                   | Buna-N          | SST 304        | C.I. 30        | SST 304          | Plated Stl.      | Red                          |                      |                      |
| GRP33-07B           |                                             |                     | X                  | C.I. 30                   | Buna-N          | SST 304        | C.I. 30        | SST 304          | Plated Stl.      |                              |                      | Black                |
| GRP33-07C           |                                             | X                   |                    | SST 316                   | Buna-N          | SST 316        | SST 316        | SST 316          | SST 316          |                              | Plain                |                      |
| GRP33-07D           | X                                           |                     |                    | SST 316                   | Buna-N          | SST 316        | SST 316        | SST 316          | SST 316          | Red                          |                      |                      |
| GRP33-07E           |                                             |                     | X                  | SST 316                   | Buna-N          | SST 316        | SST 316        | SST 316          | SST 316          |                              |                      | Black                |
| GRP33-07G           |                                             |                     | X                  | SST 316                   | EPDM            | SST 316        | SST 316        | SST 316          | SST 316          |                              |                      | Black                |
| GRP33-07H           |                                             | X                   |                    | SST 316                   | EPDM            | SST 316        | SST 316        | SST 316          | SST 316          |                              | Plain                |                      |
| GRP33-07J           |                                             |                     | X                  | C.I. 30                   | *Fluoro         | SST 304        | C.I. 30        | SST 304          | Plated Stl.      |                              |                      | Black                |
| GRP33-07K           |                                             | X                   |                    | C.I. 30                   | **TFE           | SST 304        | C.I. 30        | SST 304          | Plated Stl.      |                              | Plain                |                      |
| GRP33-07L           |                                             |                     | X                  | SST 316                   | *Fluoro         | SST 316        | SST 316        | SST 316          | SST 316          |                              |                      | Black                |
| GRP33-07M           | X                                           |                     |                    | C.I. 30                   | *Fluoro         | SST 304        | C.I. 30        | SST 304          | Plated Stl.      | Red                          |                      |                      |
| GRP33-07N           |                                             | X                   |                    | SST 316                   | *Fluoro         | SST 316        | SST 316        | SST 316          | SST 316          |                              | Plain                |                      |
| GRP33-07P           |                                             | X                   |                    | C.I. 30                   | *Fluoro         | SST 304        | C.I. 30        | SST 304          | Plated Stl.      |                              | Plain                |                      |
| GRP33-07R           | X                                           |                     |                    | SST 316                   | EPDM            | SST 316        | SST 316        | SST 316          | SST 316          | Red                          |                      |                      |
| GRP33-07S           |                                             | X                   |                    | SST 316                   | **TFE           | SST 316        | SST 316        | SST 316          | SST 316          |                              | Plain                |                      |

\* 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



THE GORMAN-RUPP COMPANY • MANSFIELD, OHIO

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

www.grpumps.com

Specifications Subject to Change Without Notice

Printed in U.S.A.

## Specification Data

SECTION 10, PAGE 1500

APPROXIMATE  
DIMENSIONS and WEIGHTS

NET WEIGHT: 20 LBS. [9,0 KG.]  
SHIPPING WEIGHTS: 25 LBS. [11,3 KG.]  
EXPORT CRATE: 0.5 CU. FT. [0,01 CU. M.]

## THEORY OF OPERATION

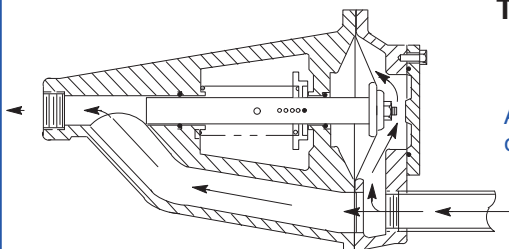


FIGURE 1

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).

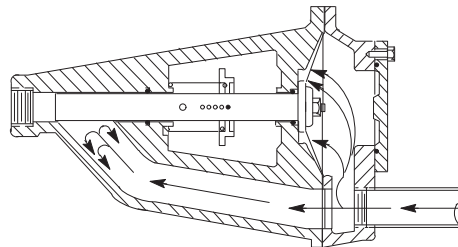


FIGURE 2

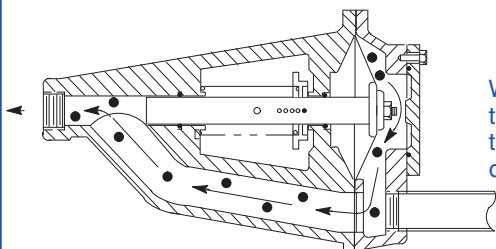
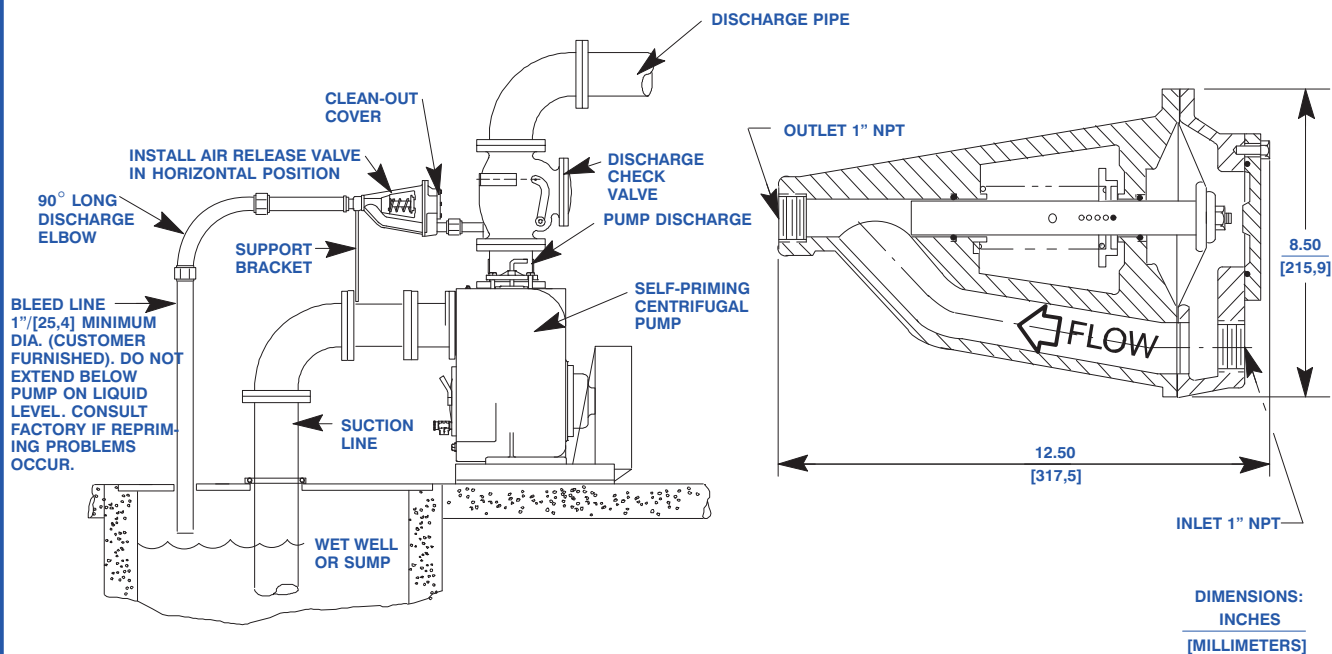


FIGURE 3

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.

## TYPICAL INSTALLATION



THE GORMAN-RUPP COMPANY • MANSFIELD, OHIO

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

Specifications Subject to Change Without Notice

Printed in U.S.A.