

CDSW



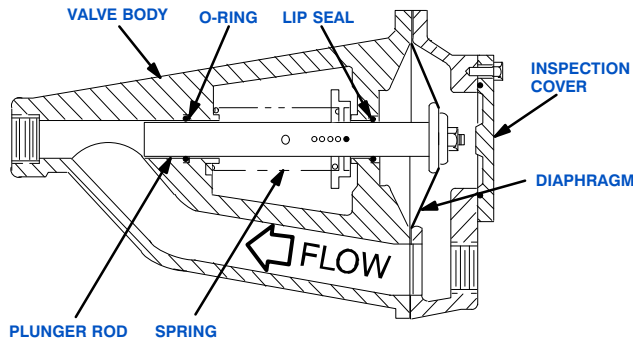
# AUTOMATIC AIR RELEASE VALVES

## 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.



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

\* 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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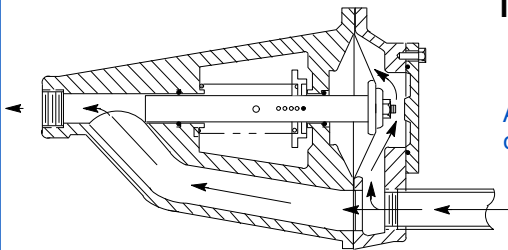
**Specification Data**

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APPROXIMATE  
DIMENSIONS and WEIGHTS

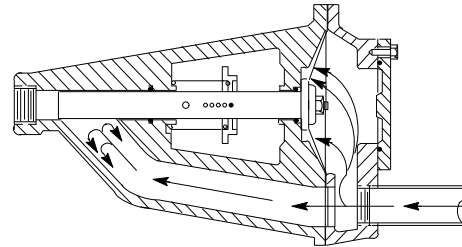
NET WEIGHT: 20 LBS. [9,0 KG.]  
SHIPPING WEIGHTS: 25 LBS. [11,3 KG.]  
EXPORT CRATE: 0.5 CU. FT. [0,01 CU. M.]

**THEORY OF OPERATION**

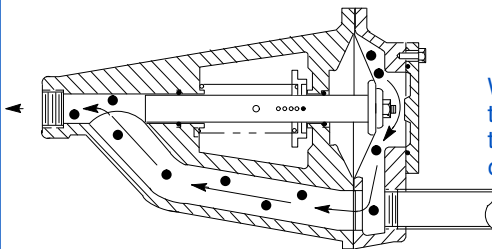


**FIGURE 1**

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**

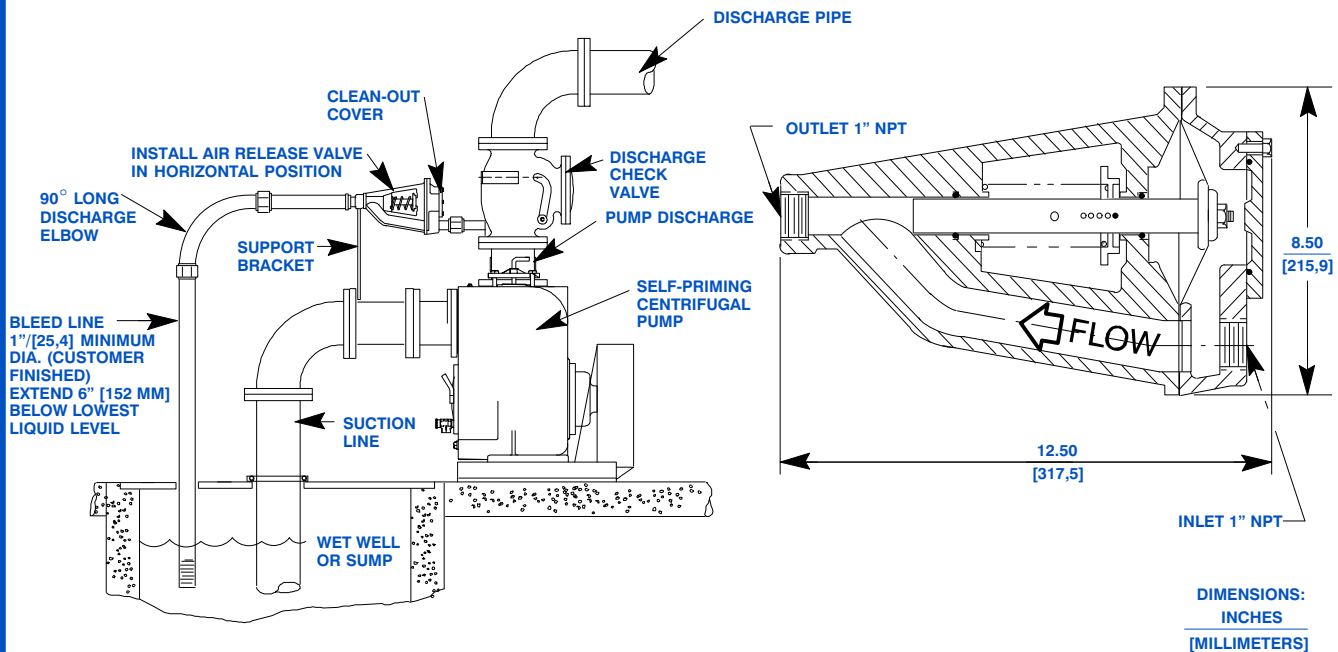


**FIGURE 3**

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**



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