



*Roto-Prime<sup>®</sup> Self-Priming  
Centrifugal Petroleum Pumps*



# ROTO-PRIME®

## Self-Priming Centrifugal Petroleum Pumps



*Roto-Prime® self-priming centrifugal pumps are specifically designed for pumping petroleum products, petrochemicals and solvents. The Roto-Prime design incorporates a variable capacity vane pump which quickly and automatically evacuates air and vapor, making the pump ideal for loading and off-loading transports and stripping hoses.*

### **Roto-Prime® Provides Automatic, Positive Pumping**

Roto-Prime® pumps are actually two pumps in one: a variable capacity vane pump used during the priming cycle, and a standard centrifugal pump to move the liquid.

Whenever air or vapor is present at the start of the pumping operation – or when there is a loss of suction because of air or vapor during pumping – the priming pump automatically moves air and vapor from the suction line to discharge line. Once the flowing liquid from the centrifugal portion of the pump builds up sufficient pressure in the discharge system, the pressure backs up through a tube to act on the bottom of the priming pump's movable slide block, placing it in a neutral position during normal operation.



#### **Full Priming**

With air or vapor in the lines, pressure of the spring on top of the movable slide holds the priming pump in full pumping position.



#### **Partial Priming**

As the pump evacuates air and vapor from the lines, liquid pressure builds up on the underside of this slide, moving it upward toward neutral.

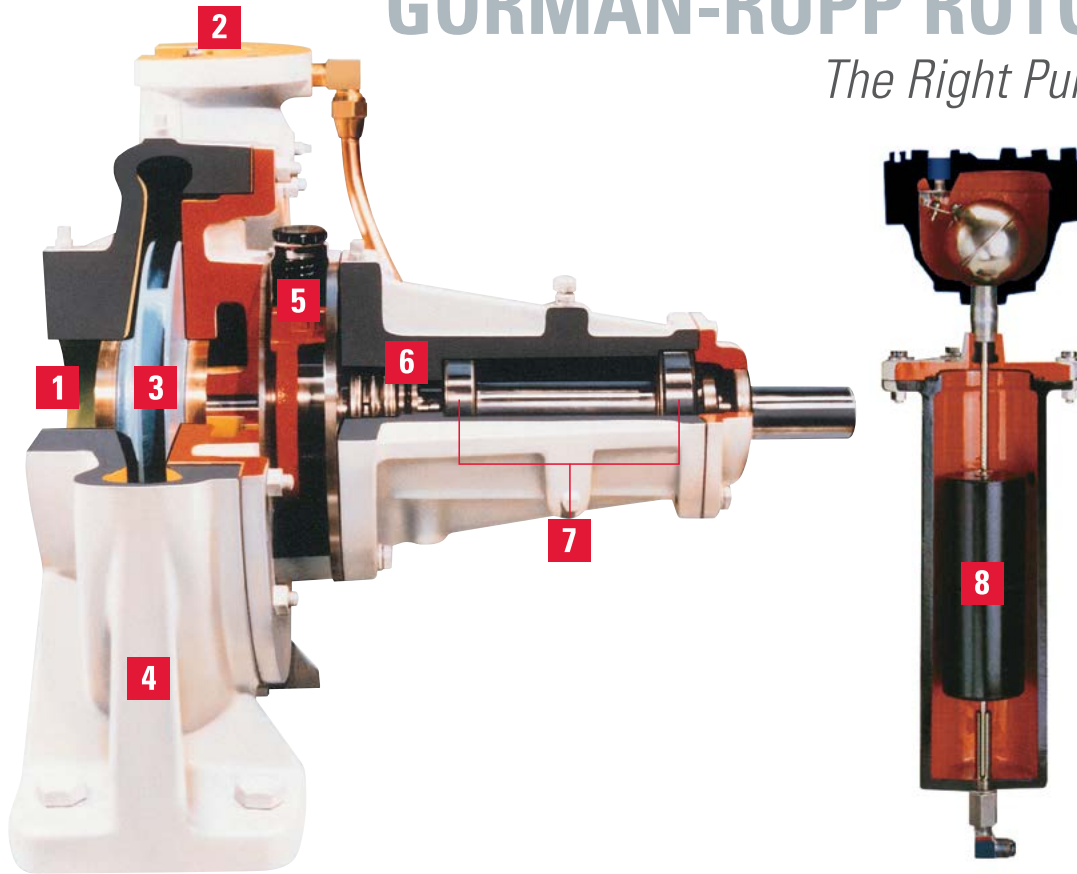


#### **Neutral**

When air and vapor are removed, liquid pressure equalizes spring pressure and the pump automatically slides into neutral...where it remains until air and vapor again appear in the system.

# GORMAN-RUPP ROTO-PRIME®

*The Right Pump For The Job*



The GRP33-06 air release valve evacuates air in the suction line to ensure positive self-priming even when pumping against moderate to high static heads. An optional air release valve with stainless steel float is available for use in ethanol service.

**1–Suction Inlet**

**2–Discharge Outlet**

**3–Balanced Impeller**

**4–Volute**

**5–Variable Displacement Priming Pump**

**6–Mechanical Seal**

**7–Sealed End Ball Bearings**

**8–Optional Air Release Valve**

## Specifications

Pump Size Range: 3" (75 mm) x 2" (50 mm) to 6" (150 mm) x 5" (125 mm)

Max. Capacity: 1450 GPM (91.5 lps)

Max. Head: 390' (118.9 m)

Max. Operating Speed: RS Series (single volute) 1750 rpm, RD Series (double volute) 3450 rpm

Materials of Construction: Aluminum Impeller, Ductile Iron or Cast Steel Housing, Steel or Stainless Steel Shaft, Fluorocarbon Mechanical Shaft Seal\*

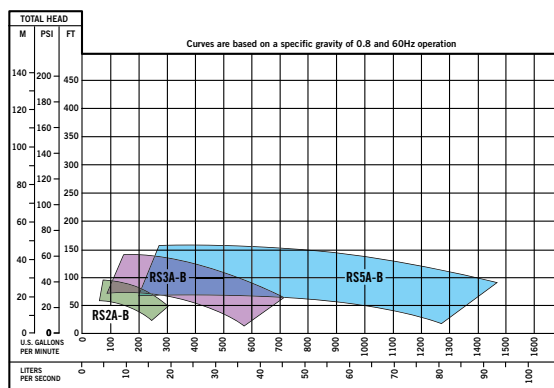
*\*Optional seals available to handle a variety of liquid formulations. Consult factory for details.*

## Optional Accessories

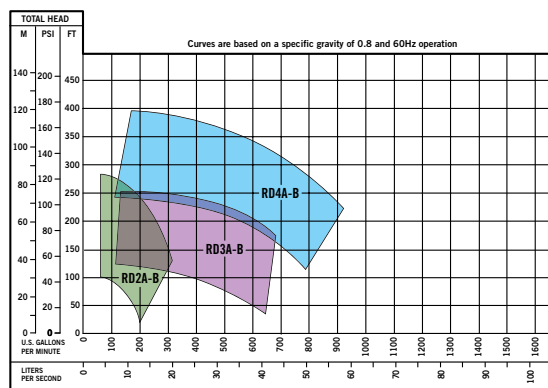
- Stainless Steel Shafts
- Bronze Impellers
- Companion Flanges
- Swing Check Valves
- Specialized Mechanical Seals
- Air Release Valve
- Available in a variety of motor and base configurations

## Pump Performance Data

RS Series



RD Series



# FLUID HANDLING EQUIPMENT DESIGNED WITH YOUR NEEDS IN MIND.



★ **Manufacturing Facilities**  
● **Distribution Centers**

**The Gorman-Rupp Company**  
Mansfield, Ohio, USA

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Mansfield, Ohio, USA

**Gorman-Rupp International**  
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**Gorman-Rupp Industries**  
Bellville, Ohio, USA

**Patterson Pump Company**  
Toccoa, Georgia, USA

**American Machine and  
Tool Co., Inc. of Pennsylvania**  
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**National Pump Company**  
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Glendale, Arizona, USA (Headquarters)  
Lubbock, Texas, USA  
Olive Branch, Mississippi, USA  
Vienna, Georgia, USA  
Zolfo Springs, Florida, USA

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**Gorman-Rupp Africa**  
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Sparks, Nevada, USA

Engineering and manufacturing superiority has been a hallmark of Gorman-Rupp since our inception in 1933. Today we bring our products to life in some of the most efficient, modern and state-of-the-art manufacturing facilities in the world. Gorman-Rupp has a selection of nearly 3,000 pump models, and our world-class team of distributors has worked closely with thousands of end users around the world. We have the proven expertise and the resources to specify, manufacture, test and service your pump, and to ensure reliable performance for the long haul.



**GRPUMPS.COM**



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