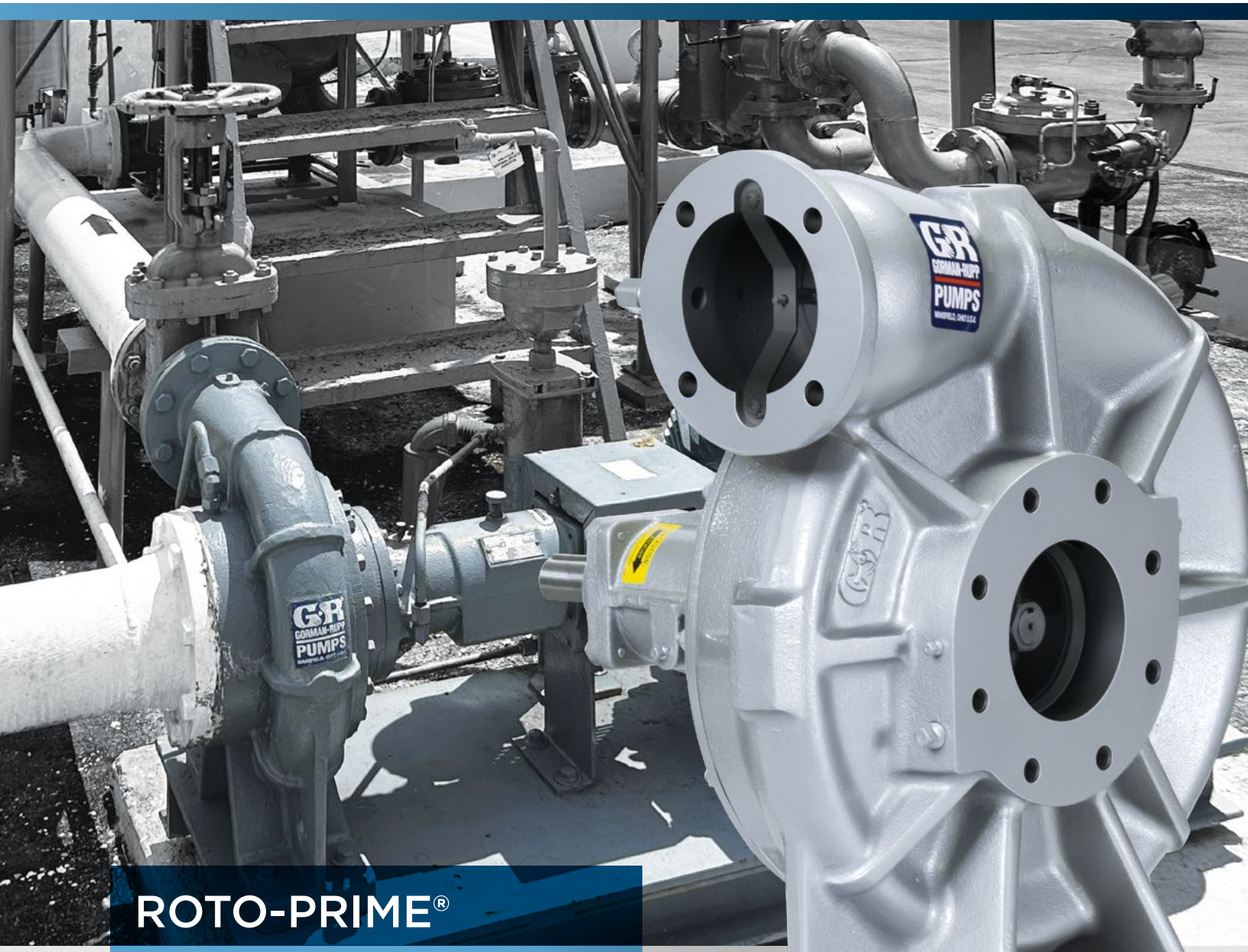


ROTO-PRIME®

Priming-Assisted Petroleum Pumps

GORMAN-RUPP PUMPS

The Pump People®



A History Of Solving Petroleum Challenges

Gorman-Rupp has been revolutionizing the pumping industry since 1933. Many of the innovations introduced by Gorman-Rupp over the years have become industry standards.

Gorman-Rupp developed its first self-priming centrifugal pump to provide our customers with a durable, reliable pump that could perform in a demanding environment. Since then, we've worked closely with our customers around the world to meet their solids-handling and clean fluid transfer needs.

With over one million Gorman-Rupp pumps and pump stations installed to date, we have the experience to intimately understand petroleum pumping requirements. Our worldwide network of distributors has experienced industry professionals on staff, giving us firsthand knowledge of your most difficult applications.

We help you solve these challenges and make the most of your limited resources by designing our pumps and stations, to deliver decades of trouble-free performance. When you choose Gorman-Rupp for your petroleum pumping applications, you'll experience some of the lowest life cycle costs in the industry and benefit from minimal service interruptions. And you'll enjoy one of the highest customer satisfaction ratings in the industry—guaranteed.



Two For One

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.

State-of-the-Art Equipment And Facilities

As the world's leading manufacturer of pumps and pumping systems, Gorman-Rupp offers you access to one of the largest and highest quality lines of petroleum pumps available in the market place today.

We maintain nearly one million square feet of the most modern manufacturing, testing and warehousing facilities in the world. Our experienced engineers take advantage of the latest technologies and innovations to custom-design, manufacture and assemble our products.

We perform rigorous testing based on Hydraulic Institute standards and test to customers' actual operating conditions in our state-of-the-art testing facility guaranteeing innovative, superior-quality products that are ready to tackle your toughest jobs.

To ensure you get the right equipment for your requirements, Gorman-Rupp partners with a worldwide network of distribution and provides them with the best and most extensive training. Gorman-Rupp distributors will work hand-in-hand with you to recommend, customize and specify equipment. And they are always available should you ever require service assistance.

With just one number to call for parts and service, it's easy and convenient to keep your equipment performing as it should.





Gorman-Rupp Roto-Prime®

The Right Pump For The Job



RD2A-B



RS3A-B



RS3A-BAR

RD2-B, RD3-B, RD4-B

RS2-B, RS3-B, RS5-B

RD2-BAR, RD3-BAR, RD4-BAR, RS2-BAR, RS3-BAR, RS5-BAR

Specialty Construction

Roto-Prime® priming-assisted centrifugal pumps are specifically designed to handle petroleum products, petrochemicals and solvents safely. 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. The design effectively strips product from the suction line, eliminating spillage of potentially volatile liquids.

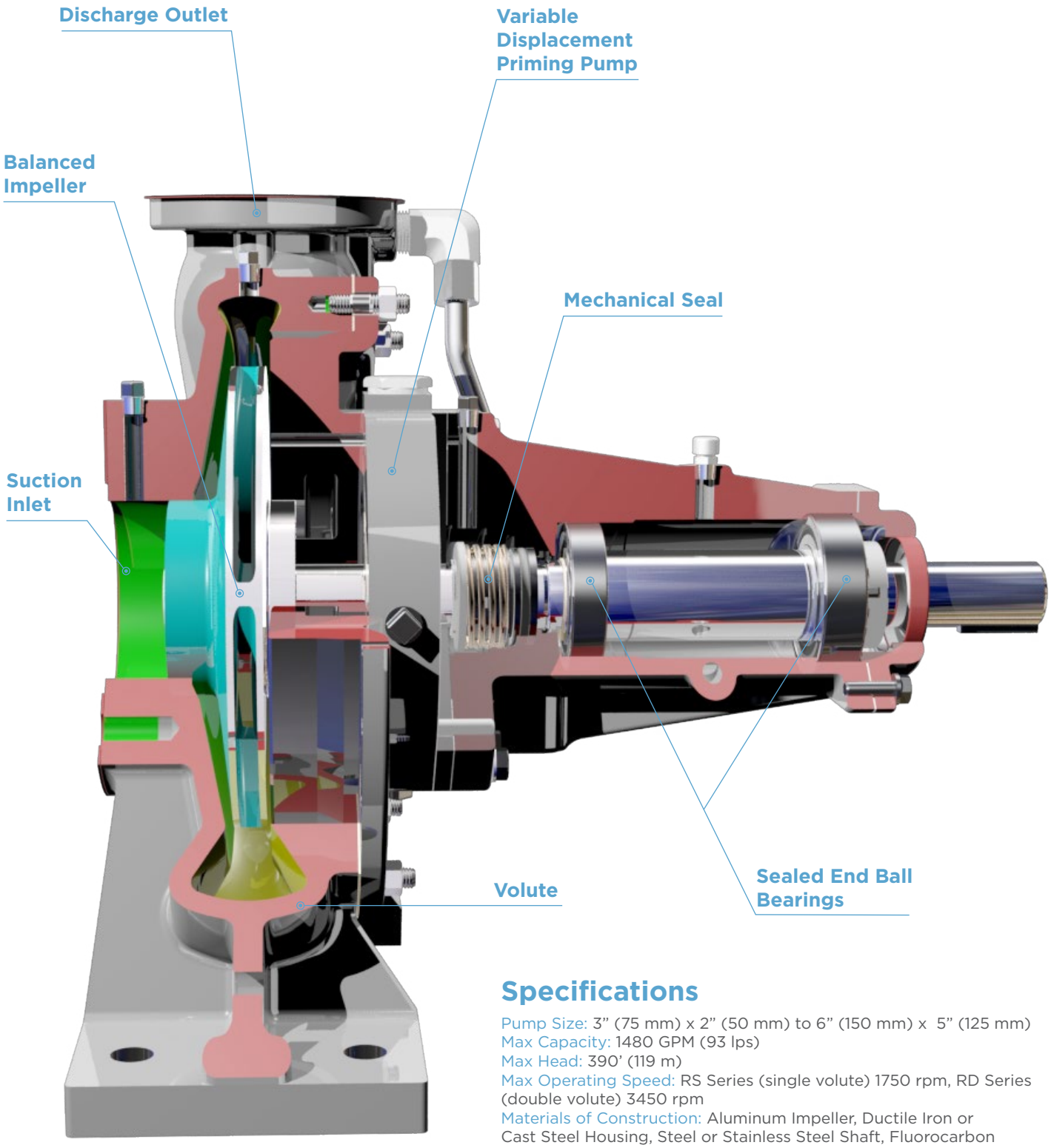
Roto-Prime pumps are available in two styles. The RS Series models are designed for standard-duty operation. RD Series pumps are ideal for higher-head applications. All models are capable of priming without liquid in the pump casing.

Features

- Removes vapor pockets from system without becoming vapor locked
- Innovative air release system provides priming and vapor removal under challenging conditions
- Operate at synchronous speeds, eliminating the need for gearboxes
- Globally accepted and widely used by major oil companies for clean product transfer
- Rugged ductile iron volute casing*
- Heavy-duty alloy steel shaft*
- Self-lubricated mechanical seal
- Sealed, permanently - lubricated bearings*

**Optional materials available. Consult factory for details.*

Roto-Prime® Product Features



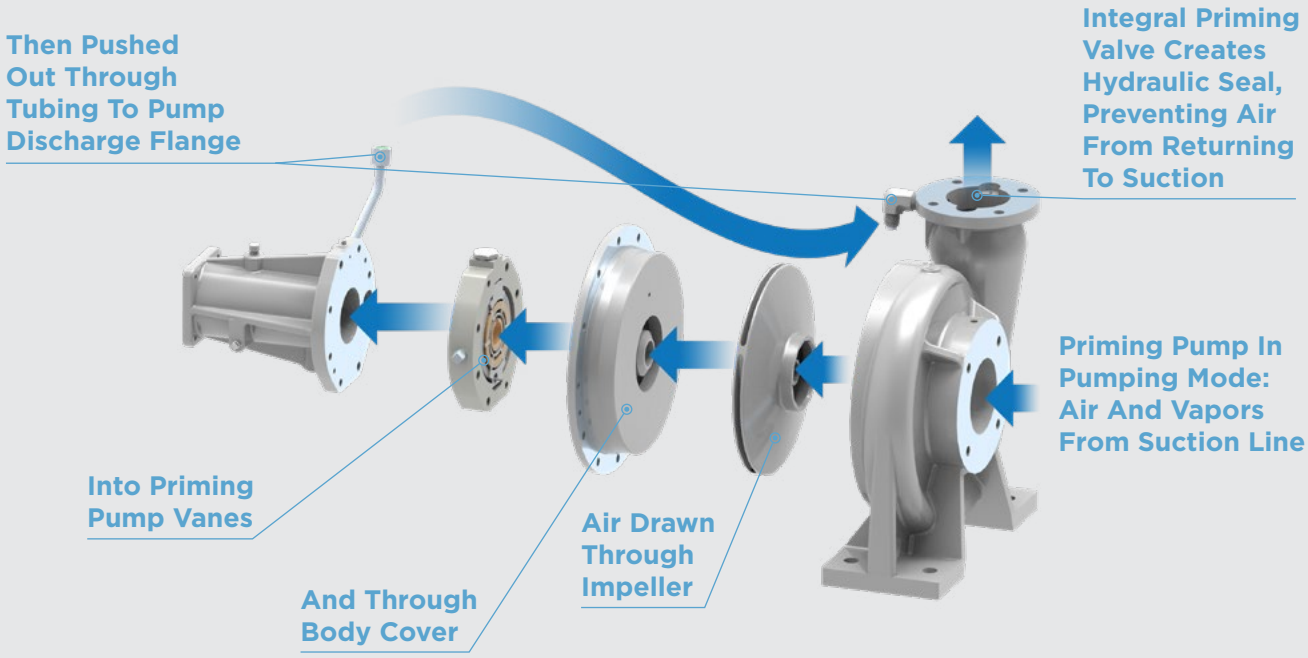
Specifications

Pump Size: 3” (75 mm) x 2” (50 mm) to 6” (150 mm) x 5” (125 mm)
Max Capacity: 1480 GPM (93 lps)
Max Head: 390’ (119 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.*

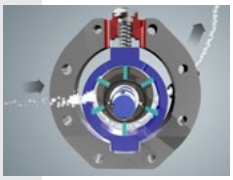
Unique Priming Process

During the priming process, a vacuum is created while the variable displacement sliding vane pump is in pumping mode. Vapor flow is directed from the suction to the priming pump through balance holes in the impeller and a kidney shaped hole in the body cover. The priming pump then discharges the vapor out tubing from the bearing housing to the volute discharge flange, located downstream of the integral priming valve. This prevents vapor from returning to the pump suction.



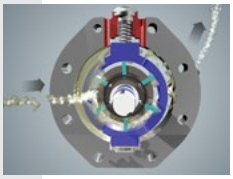
Roto-Prime® Provides Automatic, Positive Pumping

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.



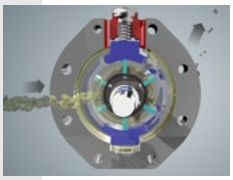
Full Priming

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

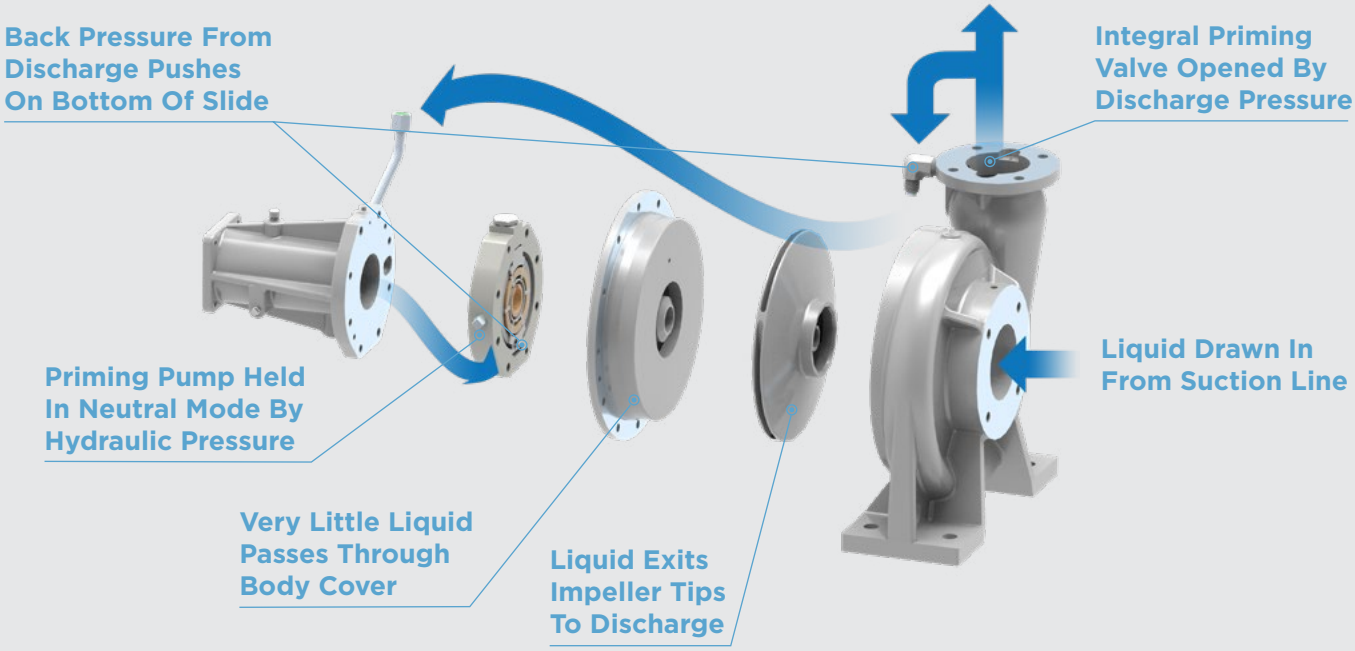
As the pump evacuates air and vapor from the lines, liquid pressure builds up on the underside of this slide, moving it upward toward neutral.



Neutral Priming

When air and vapor are removed, liquid pressure equalizes spring pressure and the pump automatically slides into neutral. It remains there until air and vapor are present in the system once more.

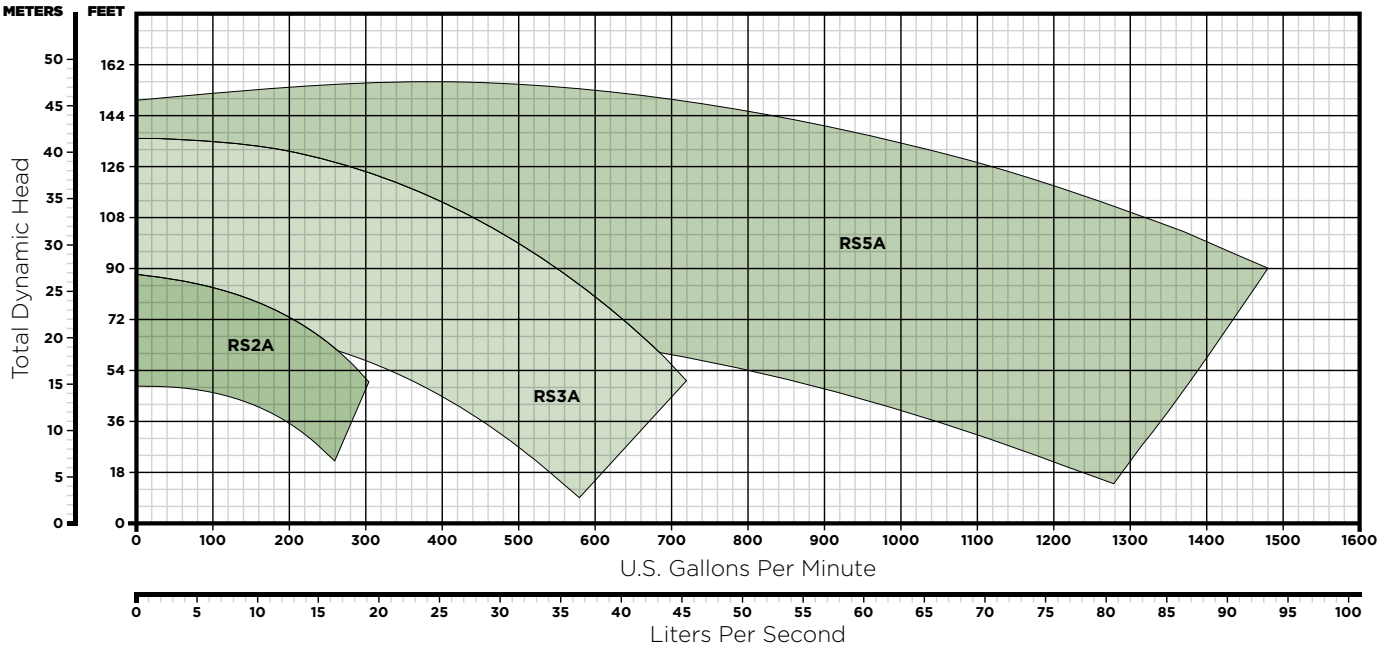
Once priming is complete, the integral priming valve is opened by discharge pressure created by the centrifugal pump's impeller. Liquid discharge pressure is then directed back into the tubing from the discharge flange, to the bearing housing and into the variable displacement priming pump. This hydraulic back pressure shifts the variable displacement priming pump into neutral mode. The priming pump remains in this position, saving wear on the vanes, until air or vapor becomes present or line stripping is required.





Setting A Whole New Standard In Pumping Performance

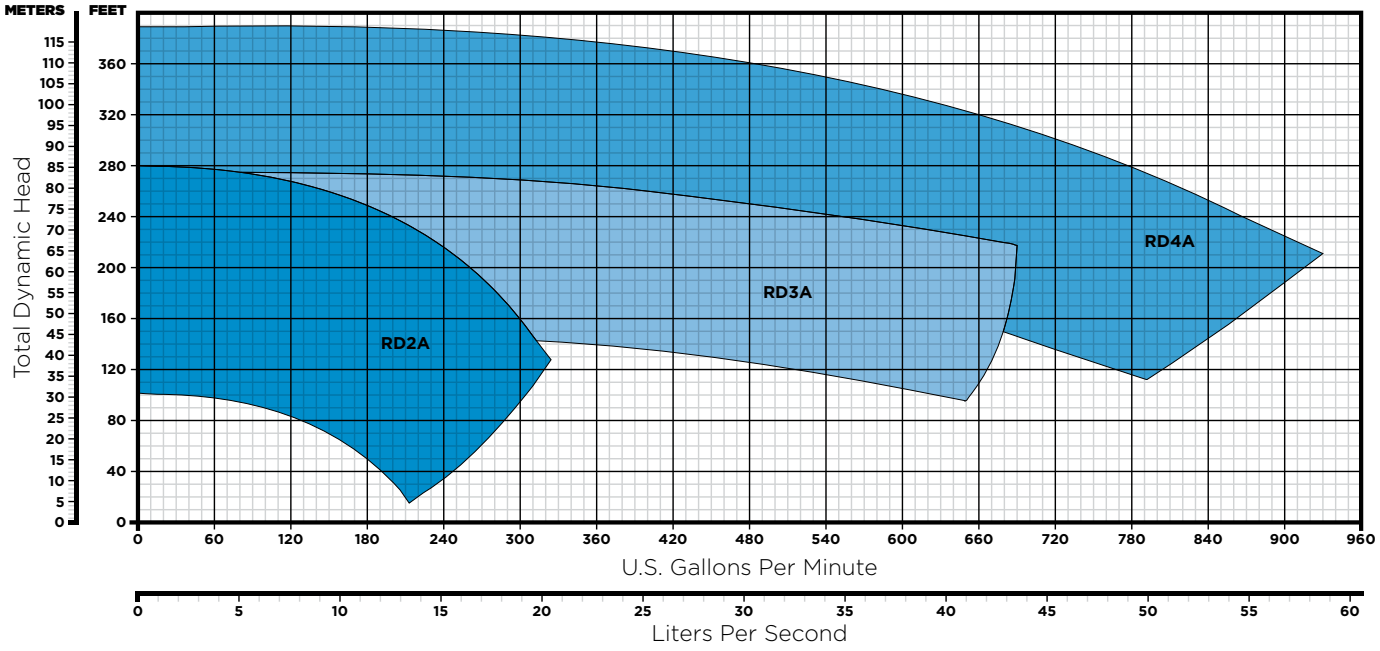
RS Series



Operating Ranges

Model	Size (Suc. x Dis.)	Max. Capacity	Max. Head	Max. Solids	Construction
RS2	3” × 2” (80 mm × 50 mm)	305 GPM (19 lps)	88’ (27 m)	.25” (6 mm)	Cast Steel, Ductile Iron
RS3	4” × 3” (100 mm × 80 mm)	720 GPM (45 lps)	136’ (42 m)	.38” (10 mm)	Cast Steel, Ductile Iron
RS5	6” × 5” (150 mm × 125 mm)	1480 GPM (93 lps)	156’ (48 m)	.50” (13 mm)	Cast Steel, Ductile Iron

RD Series



Operating Ranges

Model	Size (Suc. x Dis.)	Max. Capacity	Max. Head	Max. Solids	Construction
RD2	3" × 2" (80 mm × 50 mm)	324 GPM (20 lps)	280' (85 m)	.25" (6 mm)	Ductile Iron
RD3	4" × 3" (100 mm × 80 mm)	690 GPM (44 lps)	276' (84 m)	.38" (10 mm)	Cast Steel, Ductile Iron
RD4	6" × 4" (150 mm × 100 mm)	930 GPM (59 lps)	390' (119 m)	.50" (13 mm)	Cast Steel, Ductile Iron







Configured To Suit Your Pumping Requirements



Roto-Prime®
Base Mounted, Motor Driven

Optional Accessories



1a



1b

- Stainless Steel Shafts **(1a)**: Pump rotor shafts and exposed internal fasteners are made of stainless steel to avoid corrosion and pitting
- Bronze Impellers
- Iron Rotor for the priming pump
- Various seal options available including teflon type 9
- Companion Flanges
- Swing Check Valves
- Specialized Mechanical Seals
- Air Release Valve **(1b)**: The GRP33-08 air release valve evacuates air in the suction line to ensure positive self-priming even when pumping against moderate to high static heads. The standard air release valve is equipped with a stainless steel float which offers enhanced performance in all applications including liquids with high concentrations of ethanol.
- Available in a variety of motor and base configurations

Pumps For Petroleum Applications

Gorman-Rupp has been manufacturing pumps and related equipment for petroleum-based liquids since the 1950s. Through the years, our products have become the industry standard for new fuels, vehicles and transportation systems.

Bulk Storage Facilities

Small Area Bulk Plant

Petrochemical Facilities

Hydrocarbon Processing Facilities

Airport Fueling Systems

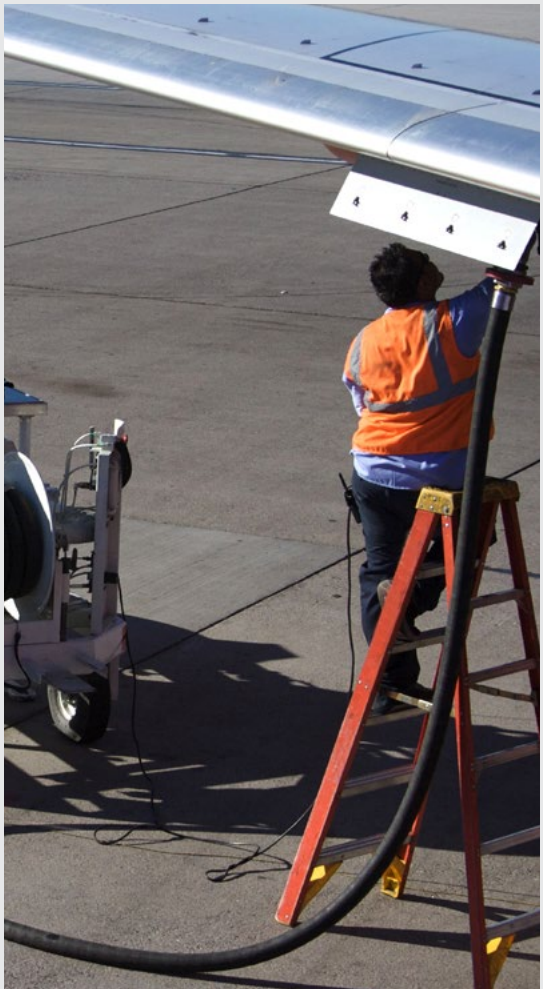
Military Bases and Fuel Depots

Meeting Military Requirements For More Than 50 Years

Unloading Transport Trucks or Rail cars

Stripping Suction Hose(s)







After Sale Support

Gorman-Rupp products stand the test of time due to our quality manufacturing processes, rigorous product testing and extensive after sale support.

Product Support

Every pump manufactured by Gorman-Rupp is supported with reference information. Pump operation and maintenance manuals (including parts lists), specification data sheets, performance curves and outline drawings in PDF and CAD formats are available on our website or through your distributor for every pump.

Warranty

The warranties on Gorman-Rupp products are some of the best in the industry. Gorman-Rupp has you covered with warranties up to 60 months.

Education & Safety

Gorman-Rupp is committed to remaining at the forefront of the industry with technology and safety. Training videos, demos and in-person training sessions created for our distributors and end-users help to keep everyone up to date on the latest safety tips and pump maintenance.

Parts

When you need a replacement part, you'll have it fast. Gorman-Rupp is fully committed to keeping your equipment running long after installation and ensuring your pump or lift station continues to meet your requirements year after year. We sell parts through our network of distributors. Find a distributor in your area for assistance.

Service

Should your pump or lift station require service, our worldwide network of factory-trained distributors are ready to quickly respond. Our distributors have the expertise to support you and your pump or lift station long after installation.

Manufacturing Facilities

Gorman-Rupp USA
Mansfield, Ohio, USA

Gorman-Rupp Canada
St. Thomas, Ontario, Canada

Gorman-Rupp Europe
Waardenburg, Netherlands
Namur, Belgium

Gorman-Rupp Africa
Cape Town, South Africa
Durban, South Africa
Johannesburg, South Africa (Headquarters)

Distribution Center

Grand Prairie, Texas, USA

Engineering and manufacturing superiority has been the 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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GORMAN-RUPP PUMPS The Pump People®

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Product information is subject to change; consult factory for details.
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